

INFORMATION PLEASE  
ALMANAC  
1957





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# INFORMATION PLEASE ALMANAC 1957



*Planned and Supervised by*  
DAN GOLENPAUL ASSOCIATES

THE MACMILLAN COMPANY

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*Editor*

DAN GOLENPAUL

*Foreword*

We believe this edition, the 11th since publication, is our best effort to date. We have added considerable new material plus entire new sections of timely interest.

We are particularly enthusiastic about the section on *Relearning Mathematics*, designed as a refresher course for adults. Parents, particularly, should find this section useful in their endeavors to help their children with school work.

We invite you to turn to the Table of Contents for a more detailed outline of the material covered in this book.

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# TABLE OF CONTENTS

News Record of 1956 . . . . .	9	New Words and Meanings . . . . .	185
Headline Stories of 1956 . . . . .	15	Misspelled Words . . . . .	197
ELECTIONS OF 1956 . . . . .	20	Forms of Address . . . . .	200
Vote for President . . . . .	22	Headline History of Our Times . . . . .	203
Governors of the 48 States . . . . .	22	States of the U. S. . . . .	214
Members of the Senate . . . . .	23	Territories of the U. S. . . . .	234
Members of the House of Representatives . . . . .	25	Cities of the U. S. . . . .	238
RELEARNING MATHEMATICS . . . . .	28	U. S. Statistics . . . . .	250
YOUR FAMILY NAME—What Does It Mean? . . . . .	52	Colleges and Universities . . . . .	291
RECIPES FROM THE WALDORF-ASTORIA . . . . .	62	U. S. Geography . . . . .	306
JETS—MISSILES—ROCKETS . . . . .	67	U. S. Climate and Weather . . . . .	310
ECONOMIES OF THE UNITED STATES AND RUSSIA . . . . .	81	Mileages between Cities . . . . .	322
Who's Who . . . . .	90	National Park System . . . . .	328
Who Was Who . . . . .	113	Museums of the U. S. . . . .	330
Contract Bridge . . . . .	124	The Rise of the U. S. . . . .	336
Parliamentary Procedure . . . . .	126	Principal Bills and Treaties . . . . .	343
MAPS . . . . .	134	Ambassadors to and from the U. S. . . . .	353
Top of World with Air Bases of U. S. and U.S.S.R. . . . .	134	The U. S. Armed Services . . . . .	355
NATO and Iron Curtain Areas . . . . .	136	U. S. Postal Regulations . . . . .	365
Europe and Near East—Communist and Non-Communist . . . . .	138	U. S. Presidential Elections (1789—52) . . . . .	369
Eurasia—Communist and Non-Communist . . . . .	140	Presidents of the U. S. . . . .	383
Far East and Pacific, Formosa, Hawaiian Islands . . . . .	142	Executive Departments and Agencies . . . . .	398
Middle East—Oil Fields, Pipelines, Airbases . . . . .	144	U. S. Cabinet Members . . . . .	402
India . . . . .	145	Conferences and Treaties . . . . .	408
South America . . . . .	146	Declaration of Independence . . . . .	413
Africa . . . . .	147	Constitution of the U. S. . . . .	416
Canada, Alaska, Greenland . . . . .	148	Flag History and Etiquette . . . . .	431
Central America & West Indies . . . . .	149	Science . . . . .	434
United States . . . . .	150	Religion . . . . .	447
Hurricanes Entering Eastern Seaboard of U. S.; Long Island . . . . .	152	Awards . . . . .	465
U. S. Geography & Time Zones . . . . .	154	Aviation . . . . .	480
British Isles . . . . .	155	Astronomy and Calendar . . . . .	487
France, Spain, Portugal . . . . .	156	Nations of the World from Afghanistan to Yugoslavia . . . . .	512
Italy, Austria, Switzerland . . . . .	157	World Miscellaneous Information . . . . .	680
Crossword Puzzle Guide . . . . .	158	Historical and News Events . . . . .	711
Word Section . . . . .	185	Firsts in America . . . . .	715
		Societies and Foundations . . . . .	716
		American Economy . . . . .	718
		Income Tax . . . . .	744
		Social Security . . . . .	747
		The United Nations . . . . .	752
		SPORTS . . . . .	772
		1956 Champions and Records . . . . .	855
		INDEX . . . . .	883



# HOW TO USE THIS BOOK FOR KNOWLEDGE AND ENTERTAINMENT

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## RELEARNING MATHEMATICS

**S**TIMULATING REFRESHER COURSE for adults and students—from first grade arithmetic to high school algebra, as taught in our classrooms today. This will help parents understand modern teaching methods and curriculums so that they can help junior get ahead.

## JETS, MISSILES AND ROCKETS

**T**HIS FASCINATING SECTION spells out the principles of motion from the automobile to rockets to help you understand the mysteries of space travel.

## COMPARISON OF AMERICAN AND RUSSIAN ECONOMIC SYSTEMS

**T**RACES THE ECONOMIC DEVELOPMENT of both countries from 1900 up to the present day. Complete story of manpower, growth of production, technological development, consumption, education, health, foreign trade, etc.

## WALDORF-ASTORIA RECIPES FOR CELEBRITIES

**A** GROUP OF RECIPES based on menus for dinners and luncheons served to visiting celebrities of the world—kings, queens, presidents, etc. Also a sample menu which includes the works: foods, wines, desserts.

## YOUR FAMILY NAME—WHAT DOES IT MEAN?

**H**ERE YOU WILL FIND DEFINITIONS of several hundred common *last names* in America—your own and those of your friends. Some of these are surprising. For example, Krause means “descendant of a curly-headed man.” You might look up the names of your guests and ask them whether they know the meanings of their own names. The results should be interesting and amusing.

## NATIONS OF THE WORLD

**F**ROM AFGHANISTAN TO YUGOSLAVIA, 169 pages packed with up-to-the-minute information about people, government, politics, geography, history, customs, resources, production, trade, communications, etc. Interesting reading and invaluable reference.

*Continued on next page*

## THE WORLD IN MAPS

**A** GROUP OF MAPS not to be found in any other publication shows you the world as it looks today. They dramatize and explain problems currently in the news.

## CROSSWORD PUZZLE GUIDE

**H**ERE WE OFFER HANDY HELP to puzzle solvers who may be stumped for a three-letter word meaning "enzyme" or a two-letter word meaning "Pagoda, Chinese." Here are deities of myth and legend and all sorts of odd words that will get you over the hurdles.

## WORD SECTION

**Y**OU WILL FIND NEW WORDS which have recently come into common use, such as "egghead" and "brainwashing," with meanings; a list of words most frequently misspelled; and correct forms of address for royalty, clergy, congressmen, etc. You can have fun testing your family and friends to see how strong they are in spelling and whether their vocabularies are up-to-date.

## NEWS RECORD

**T**HIS IS A DAY-TO-DAY RECORD of the outstanding news developments of 1956 plus a roundup article for each month, designed to entertain and to remind you of things, serious and frivolous, that were in the public eye.

## PARLIAMENTARY PROCEDURE

**A**LL THE RULES ARE EXPLAINED simply enough for anyone to understand. This should help you to conduct a meeting of your own organization and to understand the fuss and fury of conventions, investigating committees, etc.

## SPORTS

**T**HIS SECTION PRESENTS RECORDS AND GENERAL DATA from 1719 to 1956 on many sports. It also tells the story of how our popular sports started and developed. More than enough for junior and pop to chin about.

## CONTRACT BRIDGE SYSTEMS

**A** READY-REFERENCE GUIDE to up-to-date bidding, including the Goren Point-Count Method, Culbertson Honor-Trick Table, Blackwood and Stayman Conventions, etc. It offers a quick way to settle arguments at the bridge table.





(Separate articles beginning on page 15 give more specific information on Suez and the Middle-East Crisis, Satellite Revolt, Segregation and Desegregation and 1956 Presidential Election)

## JANUARY 1956

WE ENTERED 1956 feeling pretty pleased with ourselves. What a year 1955 had been! All-time high in personal income—\$272 billion. Tops in employment—64.8 million at work. Longest bull market in history, going into its seventh year. Record dividend handout—\$10.4 billion. Boy, we never had it so good! Business executives were keyed up to ulcer pitch. According to all-seeing *Time* magazine, eight Manhattan executives were playing in their own dance bands to relax their nerves; and across the country, business leaders were resorting to everything from astronomy to zither playing. On top of everything, Ford stock went on the market, and the mad scramble to buy it shot the price up to \$70. (Ssh!—a month later it had sagged to \$62.) . . . We had precious little time to worry about the far-off sinister schemes of the Communist Russian Bear, poking its nose into India and Burma, stirring up trouble between Israel and the Arabs . . . We did have time to drool over the romantic engagement of Grace Kelly to Prince Rainier III of Monaco. Pretty soon betting odds were established by Lloyds of London as to whether they would have the male heir required to preserve Monaco's independence from France.

- 3 2nd session of 84th Congress convenes.
- 5 Eisenhower, in State-of-the-Union message, opposes tax cut without national-debt reduction.
- 6 Communists tried to penetrate U. S. newspapers, Senators say after 3-day hearing.
- 9 Eisenhower farm message to Congress asks "soil bank" plan and other farm-aid measures.
- 10 Britain to fly 1,600 paratroopers to Cyprus as result of Middle East crisis.
- 12 Eisenhower asks \$2-billion Federal fund over 5 years to build schools.
- 12 FBI solves record \$2.7-million Brink's robbery of 1950.
- 16 Steel industry plans record expansion of capacity by 15 million tons in next 3 years; General Motors plans \$1-billion expansion in 1956.
- 18 Ford Motor Co. stock price set at \$64.50; first deals push it up.
- 18 Red China rejects U. S. formula for renouncing use of force in Formosa area.
- 22 29 die as train overturns in heart of Los Angeles.

24 4 Southern Governors (of Virginia, Georgia, South Carolina and Mississippi) agree to urge parallel legislative action to block Supreme Court ban on racial segregation in schools.

25 Eisenhower receives letter from Premier Bulganin urging U. S.-Russian friendship treaty.

31 Brazil inaugurates Juscelino Kubitschek as President.

DIED: 1—Frank Hague, 79; 3—Alexander Gretchaninoff, 91; 5—Christopher La Farge, 58; 5—Mistinguett, 82; 12—Sam Langford, 75; 23—Sir Alexander Korda, 62; 29—H. L. Mencken, 75; 31—A. A. Milne, 74.

## FEBRUARY 1956

THE SMOULDERING FIRES of race prejudice burst into flame in Alabama. An attractive Negro girl named Autherine Lucy exercised a right to which the courts had entitled her race: she enrolled in the University of Alabama and attended classes for three days. Then a mob threatened her life and stoned the car in which she was whisked away. . . . On the industrial front, American ingenuity was cashing in on the office coffee break in a big way. Schrafft's was grossing \$4 million a year by serving coffee in offices in the big eastern cities; the employers paid the bill so their employees wouldn't waste time going out for the bean juice. . . . Speaking of money, fourteen-year-old George L. Wright 3d was in it. He hit the \$100,000 TV jackpot on *The Big Surprise* by singing the chorus of "Me and My Shadow" with a slight quaver audible in eleven million homes. Tax experts advised him to become the head of the family and make his papa a dependent. . . . Money again, but this time sad news for the Illinois Bell Telephone Co. It muttered about losing \$400,000 a year through a mounting list of devices to avoid paying for long-distance calls. Sample: A traveler takes a plane from New York to Chicago, then phones home person-to-person and asks to speak to himself, thus notifying his wife of safe arrival. . . . On the last day of this month, President Eisenhower made a decision which the nation—and the world, for that matter—had long awaited.

- 1 Socialist Guy Mollet becomes France's 22nd postwar Premier.
- 5 Soviet protest charges U. S. is sending radio-photographic balloons into Russian skies.



- 6 Senate passes (53-38) bill to exempt natural gas from Federal price regulation at wellhead.
- 8 U. S. halts weather balloon flights from West Germany and Turkey in response to Russian protest.
- 9 World Bank agrees to lend Egypt \$200 million for Aswan dam.
- 10 Senate opens investigation of Sen. Francis Case's refusal of \$2,500 campaign contribution from advocate of natural gas bill.
- 11 Donald Maclean and Guy Burgess, defecting British diplomats, make press appearance in Moscow.
- 13 Moscow warns West not to send troops to Palestine to preserve peace.
- 17 Eisenhower vetoes freeing natural-gas producers from Federal regulation.
- 19 Eisenhower offers surplus American food to aid Western Europe in grip of extreme cold wave.
- 19 Greek election gives narrow victory to pro-West Premier Karamanlis.
- 22 U. S. releases 40,000 kg. of Uranium 235 (worth \$1 million) for peaceful atomic power at home and abroad.
- 25 20th Soviet Communist-party Congress ends in Moscow; repudiates 1-man rule.
- 29 Eisenhower announces he will run for 2nd term.
- 29 University of Alabama expels Autherine Lucy for "outrageous, false and baseless accusations," despite Federal court order to reinstate her.

**DIED:** 2—Bob Burns, 65; 8—Connie Mack, 93; 18—Gustave Charpentier, 95; 21—Edwin Franko Goldman, 78; 22—Hattie Carnegie, 69; 26—Elsie Janis, 66; 28—Sen. Harley M. Kilgore (D., W. Va.), 63; 28—Elpidio Quirino, 65.

## MARCH 1956

ONE OF THE MOST powerful men of our times suddenly was turned from a hero into a villain three years after his death. A whole generation of Russians had been taught to adore Joseph Stalin as the Great Father. And now the new rulers of the Soviet Union vilified him, called him a murderer and a blunderer. Down came his pictures, and the Russian historians began frantically rewriting their books. We wondered: What did this mean to America and the cold war? . . . Here at home we wondered who thought up the idea of whisky-flavored toothpaste, now on the market. And who improved on the idea by bringing out pencils with whisky-flavored lollipops on the end instead of the conventional eraser. . . . Our newest fad at this point (flying saucers having

faded out) was reincarnation. Thousands of us were buying a book called *The Search for Bridey Murphy*—all about how thirty-three-year-old housewife in Pueblo, Colo., having been hypnotized, recalled her previous existence, 1798-1864, in Ireland. . . . The Fuller Brush man added vitamin pills to the wares he peddled, and the trend in department-store window mannequins was toward bigger bosoms, fuller legs and more rounded lines.

- 2 Jordan dismisses Lt. Gen. John H. Glubb, British head of Arab Legion.
  - 6 Eisenhower letter of Mar. 1 to Russia published; proposes halt on making nuclear weapons after inspection system is set.
  - 8 SEATO Foreign Ministers conclude 3rd day conference; warn of Russian "infiltration."
  - 9 Archbishop Makarios of Cyprus is sent into exile by Britain.
  - 10 Protest strike paralyzes Cyprus.
  - 15 Malenkov starts 3-week tour of Britain.
  - 19 Eisenhower asks increased foreign aid of \$4.8 billion.
  - 20 Tunisia gains independence as protocol is signed with France.
  - 20 Top Soviet leaders call Stalin murderer.
  - 26 U. S. Supreme Court upholds (7-2) law requiring testimony from witnesses who have been granted immunity.
  - 27 Internal Revenue agents seize Communist party headquarters in New York, Philadelphia, Chicago, San Francisco, etc., for alleged nonpayment of income taxes.
  - 28 Iceland's Parliament asks for withdrawal of all NATO troops from island; Icelanders to assume own defense.
  - 29 Communist Hungary says 5 hanged in 1949 purge were innocent.
- DIED:** 17—Fred Allen, 61; 17—Irene Joliot-Curie, 58; 18—Louis Bromfield, 59; 25—Robert Newton, 50.

## APRIL 1956

SEEMED LIKE JUNE—the girls were getting married all over the place. Margaret Truman in Missouri, Autherine Lucy in Texas, Magda Gabor in New Jersey, Eva Gabor in New York City (sister Zsa Zsa, hopeful) and Grace Kelly, who topped them all by getting married twice in two days, both times to Prince Rainier III of Monaco. Packed elbow-to-elbow to cover the Kelly-Rainier ceremonies were an estimated 1,800 members of the newspaper-radio-photography fraternity, who, if laid end to end, would have encircled Monaco twice. Statistics as to the number of Jewish thieves present were unreliable, but the



pulled five fat robberies and for dessert took paintings valued at \$100,000. Monaco, which derives much of its income from putting out stamps, issued a new series with pictures of the bride and bridegroom, and 2,500 eager stamp buyers swamped the Monte Carlo post office. Possibly by coincidence, Metro-Goldwyn-Mayer took a full page ad in the papers on the morning of the religious marriage ceremony to announce a new movie starring Grace Kelly. . . . With all this going on, no wonder we didn't have time to worry about the threat of war in the Middle East between Israel and the Arab states. . . . Furthermore, it was circus time and forty circuses took to the road to entertain 35 million Americans and extract from them \$45 million in admissions.

- 2 Eisenhower refuses to end ban on arms to Israel.
  - 4 U. N. Security Council sends Secy. Gen. Hammarskjöld to Middle East seeking peace.
  - 5 Victor Riesel, labor columnist, attacked by acid thrower; pronounced permanently blind May 4.
  - 7 Spain proclaims Spanish Morocco independent after 44 years.
  - 8 Marine recruits drown in disciplinary night march at Parris Island, S. C., led by S/Sgt. Matthew C. McKeon.
  - 11 Congress passes farm bill; Eisenhower vetoes it Apr. 15.
  - 16 U. S. turns down plea to join METO (Baghdad Pact).
  - 17 Russia disbands Cominform.
  - 18 12 nations, including U. S. and U.S.S.R., take first step toward creating International Atomic Energy Agency.
  - 19 Wedding of Grace Kelly and Prince Rainier III completed in Monaco.
  - 21 Margaret Truman married to Clifton Daniel in Independence, Mo.
  - 26 Alger Hiss addresses Princeton students; first public speech since his prison term.
- DIED: 21—Charles MacArthur, 60; 26—Edward Arnold, 66; 30—Alben W. Barkley, 78.

## MAY 1956

THE FLOWERS of American ingenuity were in bloom this lovely spring. Soft drinks came out in aerosol cans, so you could practically knock yourself down squirting them at your soft palate. Glass telephone poles came out to frustrate woodpeckers. A California firm put out a house-trailer which was amphibious; pull up the wheels and you could cruise in the water. An aircraft company designed a

hunk of rubber which you could carry in the back of a station wagon, and when you decided you'd rather fly than stick to the road, you just got it pumped up into an airplane and soared off. . . . One question was how we would pay for all these gadgets, not to mention our hum-drum necessities. The answer was simple: buy on credit. Not only were automobiles and refrigerators offered on easy terms; department stores also went in for installment selling. They set up a system whereby a housewife could remain indefinitely in debt up to a sum of, say, \$300. Enviously, the "five and dime" stores were testing installment-buying schemes of their own. And all this buy-now-pay-sometime craze gave rise to a new industry. Springing up were firms that called themselves debt counselors (otherwise known as poolers or lumpers). For a fee, they would help you worry. They would scoop up your cash every month and parcel it out to your creditors.

- 1 Marine Corps says S/Sgt. McKeon had been drinking vodka before leading march that drowned 6 at Parris Island, S. C.
- 2 Air Force discloses that only 78 B-52 intercontinental jet bombers have been completed; 31 of these were rejected for flaw.
- 3 Dag Hammarskjöld announces Arabs and Israel agree to new U. N. cease-fire.
- 5 North Atlantic Council names committee of "3 wise men" to chart political and economic development of NATO.
- 8 Defense Secy. Wilson denies Russia is "far outstripping" U. S. in air power.
- 9 Sen. Walter F. George, of Georgia, won't seek re-election; appointed special ambassador to NATO.
- 11 Britain apologizes to Russia for frogman near Soviet cruiser *Ordzhonikidze* in Portsmouth Harbor; frogman, Comdr. Lionel Crabb, is missing and presumed dead.
- 14 Russia announces it will reduce its armed forces (estimated over 4 million) by 1.2 million within year.
- 17 Pres. Sukarno of Indonesia addresses joint session of U. S. Congress.
- 19 Defense Secy. Wilson rebukes Army and Air Force for letting their quarrels become public.
- 21 B-52 jet bomber drops 10-megaton H-bomb over Bikini atoll.
- 22 Army demonstrates Nike guided missile; it hits 500-mph. target drone plane at 35,000 feet.

28 Eisenhower signs new farm bill with soil-bank feature.

**DIED:** 12—Louis Calhern, 61; 20—Sir Max Beerbohm, 83; 24—Guy Kibbee, 74.

## JUNE 1956

ONCE AGAIN, the President's personal physician, Maj. Gen. Snyder, was aroused from bed in the middle of the night. Eight months previously it had been the heart attack. Now the President was suffering from an ailment unfamiliar and unpronounceable to most of us—ileitis. By the middle of the following night, Eisenhower was on the operating table. And the nation was speculating as to whether this second illness would cause him to bow out of the Presidential race. . . . Meanwhile, we Americans were poring over timetables and road maps, completing plans for the biggest summer travel binge the world had ever seen. At least half the population, 80 million folks or so, were going somewhere. We were bent upon spending a couple of billion abroad and another 16 billion moving from here to there in this country, jamming the highways with 4 cars to every 3 of last summer. And, in case your vacation was one long downpour of rain, there was consolation available: an insurance company began selling policies that would pay you back part of your expenses if you got excessively drenched on your holidays. . . . For the stay-at-homes, there was the new Montgomery Ward catalogue, which had two pages of "live listings." That meant animals for sale by mail order. Everything from baby pigs to myna birds. Great Dane pup: \$10 a month for 12 months. Shetland pony: \$30 down and \$270 to go.

- 1 Soviet For. Min. Molotov resigns; Dmitri T. Shepilov succeeds him.
- 4 State Dept. releases text of Khrushchev speech attacking Stalin as psychopathic murderer.
- 6 Bulganin letter asks Eisenhower to reduce armed forces.
- 9 Eisenhower undergoes operation to relieve blockage of small intestine due to ileitis; physicians say he will be physically fit to run for re-election.
- 11 Supreme Court rules (6-3) that Government exceeds powers in loyalty program; must not summarily dismiss "risks" in nonsensitive jobs.
- 12 Scientists report radiation is peril to future of race.
- 17 Moshe Sharett ousted as Israeli Foreign Minister; Golda Myerson gets post.
- 20 Marshal Tito in Moscow endorses Soviet international policies.

22 Foes of U. S. base make parliamentary gains in Iceland election.

24 U. S. Communist party declares independence of Moscow; criticizes Khrushchev-Bulganin regime.

27 *Pravda* reprints New York *Daily Worker* criticism of Khrushchev-Bulganin regime.

28-30 Workers' uprising against Communist rule in Poznan, Poland is crushed by tanks.

29 Record \$33,480,000,000 highway-building program becomes law.

30 2 airliners (TWA and United) collide over Grand Canyon, killing 128—worst airline disaster.

**DIED:** 2—Jean Hersholt, 69; 10—Fletcher Pratt, 59; 19—Thomas J. Watson, 82; 22—Walter De La Mare, 83; 23—Michael Arlen, 61; 25—Reinhold Glière, 81; 25—Fleet Adm. Ernest J. King, 77.

## JULY 1956

PEOPLE WERE GAY that night aboard the *Andrea Doria*. The new, luxurious Italian liner was due in New York tomorrow. The passengers were watching movies, or dancing or playing cards. Then the big ship suddenly shuddered and began to heel over in her death throes. She had been struck a fatal blow by the Swedish liner *Stockholm*. Messages of hope came over the air. "We have two lifeboats," said a tiny freighter. Said the mighty *Ile de France*: "We'll be there in two hours." Miraculously, all but half a hundred of the *Andrea Doria's* 1,700 people were saved. . . . In Pittsburgh, Pa., there was a tragedy from the viewpoint of the nation's kids. Ringling Brothers Circus folded its Big Top tent for the last time and abandoned its summer tour halfway through; hereafter, it would play only in big-city air-conditioned arenas. . . . For Marilyn Monroe: jaw-agape adulation from British crowds when she went to London on her honeymoon. But her left-leaning husband playwright Arthur Miller, was cited for contempt by Congress for keeping his mouth closed about former Red buddies.

- 1 United Steelworkers go on strike stopping 90% of steel production.
- 5 House kills Federal school-aid bill, 224 to 194.
- 8 Hungary frees 11,398 "rehabilitated" political prisoners.
- 8 N. Y. City Bar Association report proposes 75% cut in screening Federal employees for security risks.
- 10 Eisenhower announces through Sen. Knowland that he still is a second-term candidate.

- 10 House Un-American Activities Committee opens probe of Fund for the Republic's report on blacklisting in radio, movies.
- 12 Eisenhower again backs Nixon as running mate.
- 14 New York's old Wanamaker building gutted by fire; flooded subway underneath crippled 5 days.
- 16 Mrs. Henry Luce says arsenic in paint in her bedroom in Rome Embassy led to her illness.
- 19 Atomic Energy Commission says U. S. can minimize radioactive fall-out from H-bomb.
- 19 U. S. withdraws its offer to help Egypt build Aswan dam on Nile.
- 19 Senate rejects Federal dam in Hell's Canyon in favor of smaller private dams; Democrats cry "give-away."
- 21 Eisenhower flies to Panama for meeting of Presidents of American Republics.
- 25 Liner *Stockholm* hits liner *Andrea Doria* in foggy night off Nantucket; 1,118 rescued, 50 dead. *Andrea Doria* sinks (July 26).
- 26 Egypt announces seizure of Suez Canal control.
- 27 Month-long steel strike settled with 3-year no-strike contract with annual wage and benefit rises totalling 45.6 cents an hour.
- 6 Steel price up \$8.50 a ton after strike and wage rise.
- 7 Swedish-American Line blames *Andrea Doria* for ocean crash; puts case before U. S. court. (Aug. 8—Italian Line blames *Stockholm*, alleging wrong turn.)
- 8 Prime Minister Eden tells world Britain never can accept Egypt's seizure of Suez Canal.
- 12 Egypt rejects British invitation to 24-nation Suez conference; demands that 45 nations be invited.
- 16 Adlai E. Stevenson wins Democratic Presidential nomination on first ballot by 905½ of the 1,372 votes.
- 17 Sen. Estes Kefauver wins Democratic Vice-Presidential nomination on second ballot, 755½ to 589 for Sen. John F. Kennedy of Mass.
- 21 18 nations at London conference accept Big 3 plan for international control of Suez Canal; Russia, India, Indonesia and Ceylon balk.
- 22 Republicans unanimously renominate Eisenhower and Nixon.
- 23 U. S. Navy patrol plane with 16 aboard shot down off China coast by Red Chinese plane; no survivors.
- 27 Eisenhower announces new Soviet nuclear test in Siberia. (Announces another one Aug. 31.)
- 28 Johnny Dio, labor racketeer, arrested in Victor Riesel acid-throwing case.
- 29 U. S. to sell India \$360 million surplus food, and lend back most of payments.

**DIED:** 14—Bertold Brecht, 58; 16—Bela Lugosi; 23—Peaches Browning, 46; 25—Dr. Alfred C. Kinsey, 62.

## AUGUST 1956

**N**O HURRICANES this month, except the hot gusts that blew out of the throats of all those endless orators at the Democratic and Republican verbal orgies known as national nominating conventions. People who suffered most were the TV networks. They raked in almost \$15 million from sponsors (Westinghouse, Philco, Oldsmobile, etc.) and still lost money. Then came along a Philadelphia research outfit which reported that the politicians laid an egg. The research outfit said 70% of those interviewed were sore about missing their favorite shows; they liked professional clowns better than political ones. The "moom pitcha theayters" enjoyed their best weeks of the year as people were driven out of their homes.

- 2 Prince Rainier III and former Grace Kelly expect heir in February.
- 4 S/Sgt. Matthew C. McKeon sentenced to 9 months in prison after he led swamp march that killed 6 Marines.
- 5 Britain dispatches 1,000 paratroops on aircraft carrier to Mediterranean in Egypt-Suez crisis.

## SEPTEMBER 1956

**O**MINOUS LIGHTNING FLASHES of war flickered in the Middle East. Reinforced British and French fighting forces on Cyprus glowered at President Nasser of Egypt after his seizure of the Suez Canal. Emergency conferences of many nations were held. . . . Here at home, the ugly face of racial hatred grimaced for the second time this year as the schools opened in the South. National Guardsmen quelled riots as Negro children tried to go to white schools. . . . Another form of hysteria was afflicting the youth both at home and abroad—that peculiar musical rhythm known as "rock'n roll." Dancing to it put the kids in a frenzy that led to smashing windows and socking cops. Violent outbreaks spread to England and Norway in the wake of a movie *Rock Around the Clock*. High priest of this craze was Elvis Presley, who gyrated himself right onto big-time TV. At first, Ed Sullivan loftily declined to put him on his Sunday-



at-8 show, but changed his mind after Steve Allen guest-starred him and stole the Sunday-at-8 top rating. Starting this month, Sullivan shelled out \$50,000 for three appearances of Presley.

2 Red China refuses U. S. demand for payment for Navy plane downed with 16 on Aug. 22.

5 Eisenhower bars U. S. intervention in South as racial conflict at schools grows.

11 Britain and France "authorize" non-Egyptian pilots to quit Suez jobs.

12 Britain, U. S. and France propose Suez Canal users' group to hire own pilots and go through canal.

14 Nearly 100 expert pilots quit Suez.

14 All 590 white children boycott Clay, Ky., school as 4 Negroes enter; school board bans Negroes.

20 81 nations begin U. N. conference on peaceful use of atomic energy.

21 President Anastasio Somoza, Nicaraguan dictator, shot by assassin. (Dies Sept. 29.)

24 Hurricane Flossy hits Gulf Coast; 12 dead.

26 Israel makes reprisal raid on army post in Jordan, killing about 50.

26 Harvey M. Matusow, former government witness at Communist trial, convicted of perjury; sentenced (Sept. 28) to 5 years.

27 Fastest plane, experimental X-2 jet, crashes, killing pilot.

27 President Tito of Yugoslavia makes unexplained, unscheduled trip to Russia.

29 France and Germany agree that the Saar will return to Germany Jan. 1.

29 Eisenhower appoints William J. Brennan, Jr., to Supreme Court.

**DIED:** 27—Mildred (Babe) Didrikson Zaharias, 42.

## OCTOBER 1956

**N**EW PRODUCT in this Presidential campaign was the "salesman's safety pin." On one side it said "I Like Ike." On the other, "All the way with Adlai." . . . Another new product: Punch-button letter-writing machine. Button No. 11, for men going to conventions, leaving wives behind, writes, "Oh, I've had to go to some of the night clubs with good customers. But you wouldn't enjoy it dear, it's too tiring." . . . An old product, Bing Crosby, 52, wrote to the London *Daily Express* admitting that his days as a crooner were over, but with a touch of nostalgic pride he said he'd stretched his talent "over quite an unbelievable number of years—thirty of

them, actually." Also in England was Libe-  
race, in a white fur coat of sheared beaver  
and a night club engagement at \$3,000 a  
night. Adjectives applied to him by the  
London *Daily Mirror* included "sniggering,  
snuggling, giggling, mincing." . . . Here at  
home, a man with many names set what  
was hailed as a record—three books on the  
best-seller list at the same time. His real  
name was Edward Everett Tanner, 3d,  
but on the book lists he appeared as  
Patrick Dennis (*Auntie Mame*), and as P.  
Dennis (*Guestward Ho!*) and as Virginia  
Rowans (*The Loving Couple*) . . . Movies  
were getting so dreadfully long that we  
should have had a paid vacation in the  
middle of each—*Giant*, *Ten Command-*  
*ments*, *War and Peace*, etc.

1 Suez Canal Users' Association is  
launched in London; 15 nations join, 3  
undecided.

3 Russia accepts U. S. invitation to send  
observers to November election.

4 Captain of *Andrea Doria* blames liner  
*Stockholm* for July 25 collision, saying  
it failed to signal right turn.

5 Navy cuts court-martial sentence for  
S/Sgt. Matthew C. McKeon, who ordered  
swamp death march; not discharged.

7 U. S. renounces extraterritorial rights  
in Morocco, now independent of France.

10 66 killed as Israeli Army raids Jordan  
fort.

11 U. S. military plane with 59 aboard dis-  
appears on England-Azores flight.

13 Russia vetoes U. N. Security Council  
resolution proposing international con-  
trol of Suez Canal.

15 U. S. to continue economic aid to  
Yugoslavia, but no jet planes.

16 Pan American Stratocruiser ditches in  
Pacific; all 31 aboard rescued by Coast  
Guard cutter.

17 Britain sends jet fighter planes to  
bolster Jordan.

19 Japan and Russia sign agreement end-  
ing technical state of war.

21 Polish Communists restore Wladyslaw  
Gomulka to power, as party First  
Secretary.

21 Eisenhower accuses Bulganin of med-  
dling in U. S. election with letter pro-  
posing ban on H-bomb tests.

23 Eisenhower issues "white paper" on  
nuclear weapons; says hydrogen tests  
are vital.

24 Soviet troops and tanks in Hungary  
fight anti-Communist rebellion. Imre  
Nagy is new premier.



- 26 82 nations agree at U. N. on new International Atomic Energy Agency for peaceful use of atom. U. S. offers it 11,000 pounds of Uranium 235.
  - 29 Israel launches attack on Egypt's Sinai Peninsula and drives toward Suez Canal.
  - 30 Britain and France send 12-hour ultimatum, demanding right to put troops in Suez Canal Zone. Egypt rejects it.
  - 30 Britain and France veto U. N. Security Council cease-fire resolutions.
  - 31 French and British planes bomb Egyptian airfields.
- DIED:** 26 Walter Giesecking, 60.

### NOVEMBER 1956

- 1 Nobel Prize in physics goes to 3 Americans who developed transistor: Dr. Wil-

- liam Shockley, Dr. Walter H. Brattain and Dr. John Bardeen.
- 2 Israel claims control of Sinai Peninsula and Gaza Strip.
- 4 U. N. Assembly votes to organize U. N. police force to restore peace to Egypt.
- 5 British and French invade Egypt at Port Said.
- 5 Russia announces it is prepared to use force to "crush the aggressors and restore peace" in Egypt.
- 6 Eisenhower-Nixon win with 41 states to 7 for Stevenson-Kefauver.
- 6 British, French cease fire at Port Said and halt Suez advance.
- 12 Prince Wan Waithayakon, of Thailand, elected President of 11th session of U. N. General Assembly.

## HEADLINE STORIES OF 1956

### SUEZ AND MIDDLE EAST CRISIS

**T**HE SUEZ CANAL, opened in 1869, is a 100-mile-long waterway connecting the Mediterranean and Red seas. The Great Powers agreed in the Convention of 1888 that it would be open to ships of all nations on equal terms in peace or war, and that it would be operated by the Suez Canal Co. until 1968, at which time it would revert to Egypt. About half of the shares of this company are held by the British government, and French investors hold a large bloc. France has a preponderance on the board of directors, and operation of the canal has been largely in the hands of French administrators.

After long insistence by Egypt, the British agreed on Oct. 19, 1954, to end 72 years of military occupation of the Suez Canal Zone. The last of 83,000 British troops withdrew on June 13, 1956.

In January 1956, the United States and Great Britain offered Egypt \$200 million to get started on the High Dam at Aswan to harness the Nile River. This was despite the fact that President Nasser of Egypt had made a deal with Czechoslovakia in September 1955 to exchange Egyptian cotton for Communist weapons of war. As time went on, it developed that the deal was larger than first thought—perhaps \$200 million—and that it involved virtually mortgaging Egypt's cotton crop. Moreover, Nasser was making increasingly anti-

West speeches. His "neutralism" seemed increasingly pro-Communist.

On July 19-20, 1956, the United States and Britain withdrew their offer to help finance the Aswan dam project.

On July 26, Nasser proclaimed the seizure, or nationalization, of the canal and set up an Egyptian government Suez Canal Authority to operate it. He said he would use toll revenues to help finance the Aswan dam.

Britain reacted by reinforcing its military base on the island of Cyprus, within easy striking distance of the Suez, and by permitting France to send troops to Cyprus, too. There was sentiment in both countries for prompt military intervention to reoccupy the canal zone. The United States, wishing to avert the use of force, counseled caution.

At the invitation of the Western Big Three, representatives of 22 nations met in London; and on Aug. 23, a plan for international control and operation of the Suez Canal was adopted by 18 of the nations. Chief dissenters were India and the Soviet Union, which favored an international board which would confine itself to advising Egypt in the management.

Nasser rejected the plan. He proposed, instead, a 45-nation conference to bring

the Convention of 1888 up to date, with Egypt retaining control and operation, and agreeing to keep the canal open to all ships.

The canal normally requires at least 200 pilots to guide ships through the tricky channel. One hundred non-Egyptian pilots, mostly British and French, quit on Sept. 14. The Egyptian pilots, with the help of a few remaining foreigners, had to work up to 14 hours a day to keep the canal functioning. Egypt began hiring and training new pilots, including some from Russia and a few from the United States.

The 18 nations that sought international control met again in London on Sept. 19 and adopted—although not unanimously—a new plan said to have originated with Secretary of State Dulles. They formed a Suez Canal Users' Association. The intention was for the members to hire their own pilots and present their ships for passage, paying tolls temporarily to the SCUA until an arrangement was worked out with Egypt. This would temporarily deprive Egypt of canal revenue. If Nasser refused to let the ships through, there was the possibility that they would avoid the canal by going around the Cape of Good Hope at the tip of Africa, although this would be a slow and expensive operation.

The 15 nations that accepted membership in the Suez Canal Users' Association were the United States, Britain, France, West Germany, Italy, the Netherlands, Portugal, Spain, Norway, Sweden, Denmark, Turkey, Iran, Australia and New Zealand. Hesitating were Pakistan, Japan and Ethiopia.

On Oct. 19, Eyvind Bartels, Denmark Consul General in New York, was appointed director of the association. For the time being, however, its program was not pressed. The hope was that Egypt would enter into new negotiations.

The debate on the Suez Canal question in the United Nations was inconclusive. Secretary General Dag Hammarskjöld persuaded Britain, France and Egypt to agree to a set of six "principles." They called for free canal transit without discrimination; recognition of Egypt's sovereignty; tolls to be fixed by agreement between Egypt and users; funds to be set aside for development; disputes to be settled by arbitration. Finally, Egypt agreed that: "The operation of the canal shall be insulated from the politics of any country."

The United Nations Security Council approved the six principles. However, Russia vetoed the part of the resolution which called for international control of the canal and temporary Egyptian co-operation with the Suez Canal Users' Assn.

The Suez Canal Users' Association was

made temporarily irrelevant by a chain of events that began on Oct. 29. Israeli armed forces invaded the Sinai Peninsula, part of Egypt, and drove toward the Suez Canal. The stated purpose was to "eliminate the Egyptian fedayeen bases"—meaning Arab commando units which kept raiding Israeli territory. "Within the last week," said the Tel Aviv statement, "twenty-four Israeli casualties, dead and wounded, were caused by mines planted by the fedayeen in the southern Negev." The statement also spoke of Egypt's "illegal blockade of the Suez Canal," which barred passage of ships bound for Israel and thereby sought to strangle its "economy and life."

Within a week, Israeli forces wrested the Sinai from the Egyptians, and also the Gaza Strip, a finger of Egypt-held land that extended up the Mediterranean coast.

The Israeli thrust into Egypt was followed on the next day, Oct. 30, by an ultimatum from Britain and France. It called upon both sides to stop all warlike action and withdraw military forces 10 miles away from the Suez Canal and allow Anglo-French forces to occupy key canal positions at Port Said, Ismailia and Suez. Prime Minister Eden said the purpose was to "separate the belligerents and to guarantee freedom of transit through the canal by ships of all nations."

Israel said it would accept the 12-hour ultimatum, provided Egypt did. Egypt rejected it. British and French planes began bombing Egyptian airfields on the night of Oct. 31 with the purpose of making the Egyptian air force inoperative. The air attack—from Cyprus and from aircraft carriers—continued throughout the week, and on Nov. 5, British and French paratroopers descended in the Suez Canal Zone.

On Nov. 1 the U. N. General Assembly called into the first special session in its history, voted 64 to 5 to urge "all parties now involved in hostilities" to agree to an immediate cease-fire. This resolution, introduced by the United States, was milder in tone than the one the U. S. had introduced in the Security Council. It did not single out Israel as the sole offender, but acknowledged and deplored provocation by Egypt. Neither did it contemplate economic or military sanctions (penalties levelled against Israel, as had been implicitly suggested in the Security Council resolution of Oct. 30).

President Eisenhower announced that there would be "no United States involvement in these present hostilities," and said his Administration believed the Israeli-British-French "actions to have been taken in error." On Nov. 1, the U. N. General Assembly, called into the first special session in its history, voted 64-

Heard  
age

"all parties now involved in hostilities" to agree to an immediate cease-fire. Britain and France rejected the U. N. appeal. They said they would stop military action if (1) Israel and Egypt would agree to a U. N. force to keep the peace; (2) the U. N. would create such a force; and (3) Israel and Egypt would agree to accept temporarily Anglo-French detachments to be stationed between the combatants.

On Nov. 5, the U. N. General Assembly voted 57-0, to establish an international police force to try to end the fighting in the Middle East. Maj. Gen. E. L. M. Burns of Canada was designated as chief.

Meanwhile the Canal had been blocked to traffic by the sinking of ships in it.

Seventeen nations volunteered to contribute troops to the force (but not the Big Five permanent members of the Security Council, who were barred by the Assembly resolution). Britain, France and Israel announced their willingness to withdraw their troops from Egypt when the U. N. force took over. The first U. N. contingents began assembling Nov. 11.

July 19 U. S. withdraws its offer to help Egypt build Aswan dam on Nile.

26 Egypt announces seizure of Suez Canal control.

30 Britain halts arms shipments to Egypt.

Aug. 5 Britain dispatches 1,000 paratroopers on aircraft carrier to Mediterranean.

8 Prime Minister Eden tells world Britain never can accept Egypt's seizure of Suez Canal.

12 Egypt rejects British invitation to 24-nation Suez conference; demands that 45 nations be invited.

21 18 nations at London conference accept Big 3 plan for international control of Suez Canal; Russia, India, Indonesia and Ceylon balk.

29 Britain permits France to base troops on Cyprus in Suez crisis.

Sept. 3 5-nation Suez committee gives Nasser proposal for international control of canal. (Sept. 9—Conference ends in deadlock.)

11 Britain and France "authorize" non-Egyptian pilots to quit Suez jobs.

12 Britain, U. S. and France propose Suez canal users' group to hire own pilots and go through canal.

14 Nearly 100 expert pilots quit Suez.

15 Nasser denounces new Suez users' association as attempted "robbery."

19 Second Suez Canal conference in London hears Dulles' plan for users' association open to 18 nations.

Oct. 1 Suez Canal Users' Association is launched in London; 15 nations join, 3 undecided.

5 Special U. N. meeting on Suez Canal crisis opens.

9 British and French newspapers display anger at Dulles for his "softness" in Suez crisis.

13 Russia vetoes U. N. Security Council resolution proposing international control of Suez Canal.

29 Israel launches attack on Sinai Peninsula and drives toward Suez Canal.

30 Britain and France send 12-hour ultimatum, demanding right to put troops in Suez Canal Zone. Egypt rejects it.

30 Britain and France veto Security Council cease-fire resolutions.

31 Eisenhower pledges no U. S. involvement in Mid-East fighting.

31 French and British planes bomb Egyptian airfields.

Nov. 1 British Parliament backs Eden on Egypt attack, 324-255, after angry debate.

2 Israel claims control of Sinai Peninsula and Gaza Strip in quick military victory over Egypt.

5 U. N. Assembly votes to organize U. N. police force to restore peace to Egypt.

5 British and French invade Egypt at Port Said.

5 Russia announces it is prepared to use force to "crush the aggressors and restore peace" in Egypt.

6 British and French cease fire at Port Said and halt their Suez advance.

## SATELLITES REVOLT

THE FIRST SOVIET satellite country to break away from Moscow domination was Yugoslavia in 1948. Under President Marshal Tito it remained Communist, but independent. Stalin denounced Tito and remained bitterly hostile. In May 1955, however, Premier Bulganin and Nikita S.

Khrushchev, Soviet Communist party chief, visited Yugoslavia and brought about a restoration of friendly relations, recognizing Yugoslavia's right to pursue an independent Communist course. By implication, they recognized the right of



any satellite to pursue an independent Communist course.

Also in May 1955, Russia finally signed a peace treaty for Austria and agreed to withdraw its occupation troops. That should have meant withdrawal of Soviet troops from Hungary and Rumania, because under the peace treaties of 1947 with those countries, Russian forces stayed on ostensibly to guard the line of communication to its troops in Austria. However, Russia and its seven satellites signed the Warsaw Pact—an imitation of NATO—in May 1955, and Rumania and Hungary announced that Russian troops would remain in order to assure their "security" under the pact.

In February 1956, Khrushchev denounced Stalin in bitter terms, thereby creating a ferment in Communist parties all over the world, including in the satellites.

At the end of June 1956, workers rioted in Poznan, Poland's fourth largest city, demanding more food, better wages, and freedom from the Russians. Polish Army tanks suppressed the rioting with an officially admitted loss of 38 lives. The toll may have been higher.

On Oct. 13, the Polish Communists restored to party membership Wladyslaw Gomulka. He had been First Secretary, or chief, of the Communist party in Poland in the late 1940s, but Stalin removed him as being too independent and nationalist-minded. From mid-1951 until the end of 1954, Gomulka was imprisoned on Stalin's orders as a "Titoist."

Khrushchev got wind of the fact that the Polish Communists now intended to put Gomulka back in power as First Secretary of the party again. On Oct. 19 Khrushchev suddenly flew to Warsaw. It was generally believed that he was alarmed and angry at Poland's growing independence of Moscow. His visit coincided with a movement of Russian armed forces in Poland out of their barracks in the direction of Warsaw.

Nevertheless, the Polish Communists went ahead with their plans and on Oct. 21 elected Gomulka First Secretary. Order was maintained; there was no rioting, but there were peaceful demonstrations in which the crowds chanted "Long live free Poland!" Soviet troops returned to their barracks.

"There is more than one road to socialism," Gomulka declared. "There is the Soviet way. There is the Yugoslav way. And there are other ways." Nevertheless, through the Polish Communist newspaper he announced: "Our alliance and friendship with the Soviet Union, based on ideological unity of our parties, complete equality of our states, and full solidarity between our peoples, was, is, and will re-

main the cornerstone of our party." Soviet troops would stay in Poland, he said, as long as NATO troops were maintained in West Germany.

The development in Poland may have set off the graver events in Hungary.

On Oct. 23, 1956, Hungarian university students held a demonstration in Budapest, demanding freedom and better living conditions, and the return to power of Imre Nagy, who had been ousted from the Communist party as a "Titoist." The demonstration started peacefully, but turned into a surging riot as workers and others joined, shouting "Russkies, go home!" The mob stormed public buildings and seized factories and apartment houses.

On the following day it became a full-fledged revolt. Imre Nagy was made Premier, but the momentum of the revolt only gathered force. Many Hungarian troops sympathized with the rebels and gave them arms. Soviet troops and tanks were called in by the Hungarian government to suppress the rebellion. In at least one instance their gunfire mowed down a crowd armed only with Hungarian flags.

Battles raged not only in Budapest but throughout the country, and the rebels seized control of some cities. On Oct. 27 Premier Nagy reorganized his government bringing in a few non-Communists. In further effort to placate the rebels, he made promises to (1) negotiate the exit of all Russian troops from Hungary, (2) to restore free speech and free press and (3) to improve living conditions drastically.

The Communist government admitted over the Budapest radio that "hundreds" had been killed in the revolt. Travelers escaping to Austria believed thousands had been killed.

In further placatory moves, Premier Nagy released Josef Cardinal Mindszenty, Catholic Primate of Hungary, from his eight years of imprisonment, convicted by the Communists of treason. Nagy also announced he would withdraw Hungary from the Soviet Warsaw Pact and seek to establish a neutral status for his country. He asked United Nations help for this purpose and for withdrawal of Soviet troops.

Russia sent more troops and tanks into Hungary, stating that they were moved only for the purpose of orderly withdrawal of Soviet personnel. After midnight, early on Nov. 4, Russians were negotiating with Hungarian army leaders for withdrawal of all Soviet troops from Hungary. Russian tanks then moved into Budapest and captured the Hungarian army leaders. Soviet forces took over the whole country, crushing the revolt. Premier Nagy, after making final desperate appeals to the world for help, was deposed. The anti-Communist



rebels could not withstand Russian guns with their home-made "Molotov cocktail" grenades and their small-arms weapons.

Cardinal Mindzenty took refuge in the United States Embassy. The Russians installed Janos Kadar, General Secretary of the Hungarian Communist party, as Premier.

June 28-30 Workers' uprising against Communist rule in Poznan, Poland, is crushed by tanks.

July 18 Communists fire Matyas Rakosi as party chief in Hungary; he confesses that he ran "Stalinist dictatorship."

Sept. 27 President Tito of Yugoslavia makes unexplained, unscheduled trip to Russia with Khrushchev.

Oct. 19 Khrushchev flies to Poland to check independence movement.

21 Polish Communists restore Wladyslaw Gomulka to power as party First Secretary.

23 Khrushchev bows to Poland's demand for independence; Soviet troops in Poland withdraw to their barracks.

23 Police fire on Hungarians demonstrating for independence in Budapest.

24 Soviet troops and tanks in Hungary fight anti-Communist rebellion. Imre Nagy is new Premier.

27 Nagy takes non-Communists into Cabinet, but fighting with rebels continues.

30 Russia offers to discuss with drawing troops from Hungary, Rumania, Poland.

## SEGREGATION & DESEGREGATION

THE SUPREME COURT ruled unanimously on May 17, 1954, that racial segregation in the public schools is unconstitutional under the 14th Amendment. Subsequently, on May 31, 1955, the court ruled that the process of desegregation should be supervised by the Federal district courts with a view to achieving the goal "with all deliberate speed."

Dealing with a specific case, the Supreme Court ruled in Oct. 1955 that Autherine Lucy, a 26-year-old Negro girl from Birmingham, Ala., was entitled to enroll in the University of Alabama at Tuscaloosa. She did so in Feb. 1956. A mob of white students threw missiles at her and smashed the glass in a car in which she was riding. University President O. C. Carmichael called a meeting of the trustees, who voted unanimously to bar Miss Lucy "for her own protection." A Federal court ruled that she should be readmitted. On Feb. 29, the university expelled Miss Lucy for "outrageous, false and baseless accusations" to the effect that university officials had either conspired in or tolerated the riots that had accompanied her attempt to enter classes. Miss Lucy did not get into the university.

A vastly more extensive test of the Supreme Court ruling against segregation occurred when public schools opened in Sept. 1956. There were mob demonstrations in some small communities such as Clinton, Tenn., Mansfield, Tex., and Sturgis, Ky. The National Guard was called out in Kentucky to preserve peace as Negro pupils tried to attend formerly white schools. In Sturgis, as in nearby Clay, Ky., the demonstrations ended only when the school board barred Negroes.

A substantial share in creating the turbulence in small communities was attributed to organizers for the White Citizens Council. They came into the communities, called anti-integration rallies, and encouraged white parents to keep their children out of schools into which Negro pupils were entering. Tennessee jailed a White Citizens Council agitator for fomenting trouble.

In Louisville, Ky., the school superintendent, Omer Carmichael, had been preparing for two years for racial integration, conferring with adult groups of both races. On Sept. 10, his school system, the biggest in Kentucky, opened with 12,500 Negro pupils integrated with 34,500 white children. There was no incident.

With the school year fully under way, a survey by *The New York Times* indicated the following situation as of Oct. 1, 1956:

Approximately 300,000 Negro children, an increase of 50,000 over September 1955, were attending mixed schools or were eligible to do so. Approximately 2,400,000 Negro and 6,500,000 white pupils remained in segregated classes. Integrated school districts numbered 780; segregated numbered 3,000.

Integration was in process or had been accomplished in the District of Columbia (in full effect), Delaware, Maryland, West Virginia, Kentucky, Missouri and Oklahoma.

Integration at college level only was in effect in Virginia, North Carolina and Louisiana. No desegregation at any level existed in Mississippi, Alabama, Florida, Georgia and South Carolina.

In mid-September, the Virginia House of Delegates approved bills striking out the state's compulsory school attendance law and providing that state money could be diverted to private schools so that pupils wishing to avoid integrated schools could get tuition in white private schools. Similar laws are in effect in Georgia, South Carolina, Alabama, Mississippi and Louisiana.

- Jan. 9 Virginia votes 2 to 1 for continuing school segregation despite U. S. Supreme Court ban.
- 24 4 Southern Governors (of Virginia, Georgia, South Carolina and Mississippi) agree to urge parallel legislative action to block Supreme Court ban on racial segregation in schools.
- Feb. 7 University of Alabama temporarily bars first Negro student, Autherine Lucy, after protest riots.
- 21 Alabama indicts 115 Negroes for boycotting busses over racial segregation.
- 24 Excommunication threatened

Catholic legislators in Louisiana if they bar racial integration in parochial schools.

- 29 University of Alabama expels Autherine Lucy.
- Mar. 11 100 Senators and Representatives from South issue manifesto assailing Supreme Court order on racial integration.
- Apr. 22 Autherine Lucy married in Dallas, Tex., to Rev. Hugh Foster, Baptist preacher.
- Aug. 30 Violence flares at Tennessee and Texas high schools under court order to desegregate.
- Sept. 5 Eisenhower bars U. S. intervention in South as racial conflict at schools grows.
- 10 Louisville, Ky., schools racially integrated without trouble.
- 14 All 590 white children boycott Clay, Ky., school as 4 Negroes enter; school board bans Negroes.
- 18 School board ousts 8 Negroes from Sturgis, Ky., high school after whites boycotted it.

## 1956 PRESIDENTIAL ELECTION

**P**RESIDENT EISENHOWER announced his intention of running for re-election on the last day of February 1956. There was a period of uncertainty, however, in June after he underwent an operation to relieve blockage of the small intestine attributed to ileitis. A month later he authorized Sen. William F. Knowland of California, Republican minority leader, to announce that he still was in the race.

Both major party nominating conventions were held later than usual, in August, with the Democrats first. This had been preceded by a long struggle for delegates in primary elections, in which Adlai E. Stevenson and Estes Kefauver were the contestants. Stevenson came out so far ahead that Kefauver withdrew. A third aspirant, Gov. Averell Harriman of New York, did not enter primaries.

Just before the convention, former President Harry S. Truman threw his support to Harriman. On the first ballot, Stevenson had 905½ votes, Harriman had 210, and the rest of the votes went to seven others, none of whom received as many as 100. It was Stevenson on the first.

In the contest for the Vice Presidential nomination, the main convention opponents were Kefauver and Sen. John F. Kennedy of Massachusetts. Kennedy looked like the winner as the second roll call started, but Kefauver's Tennessee colleague, Sen. Albert Gore, released his

state's 32 votes and Kefauver rolled up 755½ votes to Kennedy's 589.

Some excitement was afforded to the Republican National Convention when in July, one month before the nominations, Harold E. Stassen, White House adviser on disarmament, came out against the re-nomination of Vice President Richard M. Nixon. Stassen favored nominating Gov. Christian A. Herter of Massachusetts instead. He said a private poll indicated that an Eisenhower-Herter ticket would be 6% stronger than Eisenhower-Nixon. "Millions of votes" would be lost, said Stassen.

Herter declined to be a candidate and announced that he would place Nixon's name in nomination. Nevertheless, Stassen plugged away at his "dump-Nixon" campaign, saying he had moral and financial support from prominent Republicans. As late as Aug. 21, one day before the nominating session, Stassen persisted. Next day, convinced that Nixon would win, Stassen seconded his nomination.

As the Presidential campaign developed, it became apparent that both Eisenhower and Stevenson were middle-of-the-road "moderates."

President Eisenhower's personal popularity was perhaps the greatest asset of the Republicans.

The Republicans emphasized the theme of "peace and prosperity." The Eisenhower Administration took credit for ending the

war in Korea, and for the current economic boom.

Stevenson and Kefauver brought out the following issues, among others:

1. They asserted that Vice President Nixon would be the "heir apparent" to the Presidency. "This is a man," said Stevenson, referring to Nixon, "of many masks. Who can say they have seen his real face?"

2. Stevenson said it would be one of his first tasks, if elected, to consult with the other atomic powers, Britain and Russia, "at whatever level—in whatever place—" to seek an agreement to ban further tests of hydrogen bombs, as being a peril to the human race. He would take the lead for simple international agreement. Eisenhower did not favor an H-bomb test halt except as part of an international system of inspection and control that would give some assurance of genuine compliance. He said Stevenson's proposal was "pie-in-the-sky promises and wishful thinking."

3. Stevenson favored ending the draft as soon as it was safe to do so and the substitution of a more professional army. Eisenhower opposed this.

4. Stevenson favored 90% rigid price supports on principal crops. Eisenhower favored continuance of flexible farm price supports which could go lower, and therefore discourage piling up of huge government surpluses.

President Eisenhower and Vice President Nixon won re-election on Nov. 6 by a greater margin than in 1952. Their electoral vote was 457 as compared to 74 for Stevenson and Kefauver. The comparable 1952 figures were Eisenhower 442, Stevenson 89.

Stevenson won only 7 states in the South—Missouri, Arkansas, Mississippi, Alabama, Georgia, South Carolina and North Carolina. Eisenhower not only held the two Southern states he had won in 1952—Texas and Florida—but also captured Louisiana, Kentucky and West Virginia. Stevenson had won 9 states in 1952. The only state he lost in 1952 and gained in 1956 was Missouri.

The unofficial popular vote was Eisenhower 34.8 million; Stevenson 25.5 million. The 1952 totals were Eisenhower 33.8 million to Stevenson's 27.3 million. Eisenhower became the first Republican President to win re-election since William McKinley in 1900.

The Eisenhower landslide did not, however, give the Republicans the control of Congress. This was the first time since 1848 that a President won the election and at the same time lost both houses of Congress to a rival party.

The party standing in the old Senate was 49 Democrats to 47 Republicans. In the

new Senate the standing remained the same. The Democrats had control of the House of Representatives with 232 seats to 200 Republican seats. Results of three House contests were delayed for possible re-canvases.

Feb. 14 Physicians say Eisenhower could stand burdens of Presidency 5 or 10 years more.

29 Eisenhower announces he will run for 2nd term.

Mar. 13 Kefauver beats Stevenson in New Hampshire primary.

20 Kefauver beats Stevenson in Minnesota primary.

Apr. 26 Nixon announces candidacy for Vice Presidential renomination.

May 12 Eisenhower's heart is "well healed," physicians say.

18 Stevenson wins all 16 Oregon delegates to Democratic convention.

29 Stevenson wins Florida primary over Kefauver by narrow margin.

June 5 Stevenson beats Kefauver in Calif. primary by wide margin.

9 Eisenhower undergoes operation to relieve blockage of small intestine due to ileitis.

9 Gov. Harriman, of New York, announces candidacy for Democratic Presidential nomination.

July 10 Eisenhower announces through Sen. Knowland that he is still a second-term candidate.

12 Eisenhower again backs Nixon as running mate.

23 Harold E. Stassen urges dropping Nixon and nominating Christian A. Herter for Vice President.

31 Kefauver quits Presidential race; backs Stevenson.

Aug. 11 Truman announces he favors Harriman.

16 Stevenson wins Democratic Presidential nomination on 1st ballot.

17 Kefauver wins Democratic Vice Presidential nomination on 2nd ballot.

22 Republicans unanimously renominate Eisenhower and Nixon.

Sept. 10 Maine Democrats rejoice as Gov. Edmund S. Muskie is re-elected, plus a Democratic Congressman.

Oct. 15 Stevenson says his first task if President is to ban H-bomb tests.

23 Eisenhower issues "white paper" on nuclear weapons; says hydrogen tests are vital.

Nov. 6 Eisenhower-Nixon ticket wins 41 states to 7 for Stevenson-Kefauver.



## Vote for President by States, 1956

(unofficial returns)

State	Popular		Electoral		State	Popular		Electoral	
	Rep.	Dem.	R	D		Rep.	Dem.	R	D
Alabama.....	167,986	232,259	...	11	Nevada.....	43,060	29,484	3	...
Arizona.....	161,673	103,337	4	...	New Hampshire.....	176,320	90,420	4	...
Arkansas.....	135,149	157,470	...	8	New Jersey.....	1,564,364	839,720	16	...
California.....	1,805,754	1,482,068	32	...	New Mexico.....	127,346	90,275	4	...
Colorado.....	385,513	254,509	6	...	New York.....	4,318,104	2,742,288†	45	...
Connecticut*	709,395	404,209	8	...	North Carolina.....	548,154	568,882	...	14
Delaware.....	97,484	82,908	3	...	North Dakota.....	102,680	65,505	4	...
Florida.....	583,469	425,564	10	...	Ohio.....	2,236,728	1,412,670	25	...
Georgia.....	183,145	353,105	...	12	Oklahoma.....	471,688	384,526	8	...
Idaho.....	167,252	105,194	4	...	Oregon.....	295,513	234,795	6	...
Illinois.....	2,538,074	1,717,544	27	...	Pennsylvania.....	2,558,747	1,966,875	32	...
Indiana.....	1,162,784	770,513	13	...	Rhode Island.....	220,962	160,507	4	...
Iowa.....	713,584	489,744	10	...	South Carolina.....	75,623	133,392	...	8
Kansas.....	519,254	266,982	8	...	South Dakota.....	101,894	78,654	4	...
Kentucky.....	418,168	353,535	10	...	Tennessee.....	460,515	451,883	11	...
Louisiana.....	295,033	230,401	10	...	Texas†.....	925,397	731,553	24	...
Maine.....	249,024	101,979	5	...	Utah.....	213,456	116,243	4	...
Maryland.....	522,128	368,717	9	...	Vermont*.....	110,781	44,243	3	...
Massachusetts.....	1,391,873	947,587	16	...	Virginia.....	386,320	264,110	12	...
Michigan.....	1,637,686	1,306,769	20	...	Washington.....	530,072	449,815	9	...
Minnesota.....	640,103	545,333	11	...	West Virginia.....	443,208	376,562	8	...
Mississippi.....	55,188	124,699	...	8	Wisconsin.....	951,045	583,222	12	...
Missouri.....	839,601	860,601	...	13	Wyoming.....	73,347	48,096	3	...
Montana.....	136,947	102,354	4	...	Totals.....	32,811,095	23,828,564	457	74
Nebraska.....	329,504	177,523	6	...					

\* Reports by towns. † Includes 280,373 Liberal Party votes. ‡ Reports by counties. NOTE: The returns shown in this table represent 91.1% of the nation's districts.

## Governors of the 48 States

(Double asterisk indicates incumbent re-elected in 1956 elections; single asterisk indicates non-incumbent elected in 1956.)

ALABAMA: James E. Folsom, D.  
 ARIZONA: \*\*Ernest W. McFarland, D.  
 ARKANSAS: \*\*Orval Faubus, D.  
 CALIFORNIA: Goodwin J. Knight, R.  
 COLORADO: \*S. L. R. McNichols, D.  
 CONNECTICUT: Abraham A. Ribicoff, D.  
 DELAWARE: \*\*J. Caleb Boggs, R.  
 FLORIDA: \*\*LeRoy Collins, D.  
 GEORGIA: Samuel Marvin Griffin, D.  
 IDAHO: Robert E. Smylie, R.  
 ILLINOIS: \*\*William G. Stratton, R.  
 INDIANA: \*Harold W. Handley, R.  
 IOWA: \*Herschel C. Loveless, D.  
 KANSAS: \*George Docking, D.  
 KENTUCKY: A. B. Chandler, D.  
 LOUISIANA: Earl K. Long, D.  
 MAINE: \*\*Edmund S. Muskie, D.  
 MARYLAND: Theodore R. McKeldin, R.  
 MASSACHUSETTS: \*Foster Furcolo, D.  
 MICHIGAN: \*\*G. Mennen Williams, D.  
 MINNESOTA: \*\*Orville L. Freeman, D.  
 MISSISSIPPI: J. P. Coleman, D.  
 MISSOURI: \*James T. Blair, Jr., R.  
 MONTANA: \*\*J. Hugo Aronson, R.  
 NEBRASKA: \*\*Victor E. Anderson, R.

† In doubt; returns incomplete.

NEVADA: Charles H. Russell, R.  
 NEW HAMPSHIRE: \*\*Lane Dwinell, R.  
 NEW JERSEY: Robert B. Meyner, D.  
 NEW MEXICO: \*Edwin L. Mechem, R.  
 NEW YORK: W. Averell Harriman, D.  
 NORTH CAROLINA: \*\*Luther H. Hodges, D.  
 NORTH DAKOTA: \*John E. Davis, R.  
 OHIO: \*C. William O'Neill, R.  
 OKLAHOMA: Raymond D. Gary, D.  
 OREGON: \*Robert D. Holmes, D.  
 PENNSYLVANIA: George M. Leader, D.  
 RHODE ISLAND: \*\*Dennis J. Roberts, D.†  
 RHODE ISLAND: \*Christopher Del Sesto, R.†  
 SOUTH CAROLINA: George B. Timmerman, Jr., D.  
 SOUTH DAKOTA: \*\*Joseph J. Foss, R.  
 TENNESSEE: Frank C. Clement, D.  
 TEXAS: \*Price Daniel, D.  
 UTAH: \*George D. Clyde, R.  
 VERMONT: \*\*Joseph B. Johnson, R.  
 VIRGINIA: Thomas B. Stanley, D.  
 WASHINGTON: \*Albert Rosellini, D.  
 WEST VIRGINIA: \*Cecil Underwood, R.  
 WISCONSIN: \*Vernon W. Thompson, R.  
 WYOMING: Milward L. Simpson, R.

## CONGRESS OF THE UNITED STATES

## PARTY STRENGTH IN 81ST TO 85TH CONGRESSES

## The Senate\*

## The House†

	81st 1949	82nd 1951	83rd 1953	84th 1955	85th 1957	81st 1949	82nd 1951	83rd 1953	84th 1955	85th† 1957
Democratic .....	54	49	47	48	49	263	235	213	232	231
Republican .....	42	47	48	47	47	171	199	221	203	200
Other .....	0	0	1	1	0	1	1	1	0	0

\*49 necessary for majority. †218 necessary for majority. ‡ As of our going to press, there was 1 death in the House and 3 races were still in doubt. NOTE: The year shown with each Congress is the one in which the 1st session was held. Party breakdown is according to the election held the preceding November.

## THE EIGHTY-FIFTH CONGRESS

## THE SENATE

The expiration date of each Senator's term is January of the year shown in parentheses. An asterisk (\*) indicates that the Senator was re-elected in the 1956 elections to serve a full 6-year term ending in 1963.

## ALABAMA

\*Lister Hill, D (1963)  
John J. Sparkman, D (1961)

## ARIZONA

\*Carl Hayden, D (1963)  
Barry M. Goldwater, R (1959)

## ARKANSAS

John L. McClellan, D (1961)  
\*J. W. Fulbright, D (1963)

## CALIFORNIA

William F. Knowland, R (1959)  
\*Thomas H. Kuchel, R (1963)

## COLORADO

Gordon Allott, R (1961)  
John A. Carroll, D (1963)

## CONNECTICUT

\*Prescott Bush, R (1963)  
William A. Purtell, R (1959)

## DELAWARE

John J. Williams, R (1959)  
J. Allen Frear, Jr., D (1961)

## FLORIDA

Spessard L. Holland, D (1959)  
\*George A. Smathers, D (1963)

## GEORGIA

Richard B. Russell, D (1961)  
Herman E. Talmadge, D (1963)

## IDAHO

Henry C. Dworshak, R (1961)  
Frank Church, D (1963)

## ILLINOIS

Paul H. Douglas, D (1961)  
\*Everett M. Dirksen, R (1963)

## INDIANA

\*Homer E. Capehart, R (1963)  
William E. Jenner, R (1959)

## IOWA

\*Bourke B. Hickenlooper, R (1963)  
Thomas E. Martin, R (1961)

## KANSAS

Andrew F. Schoeppel, R (1961)  
\*Frank Carlson, R (1963)

## KENTUCKY

Thurston B. Morton, R (1963)  
John Sherman Cooper, R (1961)

## LOUISIANA

Allen J. Ellender, Sr., D (1961)  
\*Russell B. Long, D (1963)

## MAINE

Margaret Chase Smith, R (1961)  
Frederick G. Payne, R (1959)

## MARYLAND

\*John M. Butler, R (1963)  
J. Glenn Beall, R (1959)

## MASSACHUSETTS

Leverett Saltonstall, R (1961)  
John F. Kennedy, D (1959)

## MICHIGAN

Charles E. Potter, R (1959)  
Patrick V. McNamara, D (1961)

## MINNESOTA

Edward J. Thye, R (1959)  
Hubert H. Humphrey, D (1961)

## MISSISSIPPI

James O. Eastland, D (1961)  
John S. Stennis, D (1959)

## MISSOURI

\*Thomas C. Hennings, Jr., D (1963)  
Stuart Symington, D (1959)

## MONTANA

James E. Murray, D (1961)  
Mike Mansfield, D (1959)

## NEBRASKA

Roman L. Hruska, R (1959)  
Carl T. Curtis, R (1961)

## NEVADA

George W. Malone, R (1959)  
\*Alan Bible, D (1963)

## NEW HAMPSHIRE

Styles Bridges, R (1961)  
\*Norris Cotton, R (1963)

## NEW JERSEY

H. Alexander Smith, R (1959)  
Clifford P. Case, R (1961)

## NEW MEXICO

Dennis Chavez, D (1959)  
Clinton P. Anderson, D (1961)

## NEW YORK

Irving M. Ives, R (1959)  
Jacob K. Javits, R (1963)

## NORTH CAROLINA

\*Sam J. Ervin, Jr., D (1963)  
W. Kerr Scott, D (1961)

## NORTH DAKOTA

William Langer, R (1959)  
\*Milton R. Young, R (1963)

## OHIO

John W. Bricker, R (1959)  
Frank J. Lausche, D (1963)

## OKLAHOMA

Robert S. Kerr, D (1961)  
\*A. S. Mike Monroney, D (1963)

## OREGON

\*Wayne Morse, D (1963)  
Richard L. Neuberger, D (1961)

## PENNSYLVANIA

Edward Martin, R (1959)  
Joseph Clark, Jr., D (1963)

## RHODE ISLAND

Theodore F. Green, D (1961)  
John O. Pastore, D (1959)

## SOUTH CAROLINA

\*Olin D. Johnston, D (1963)  
Strom Thurmond, D (1961)

**SOUTH DAKOTA**

Karl E. Mundt, R (1961)  
\*Francis Case, R (1963)

**TENNESSEE**

Estes Kefauver, D (1961)  
Albert Gore, D (1959)

**TEXAS**

Lyndon B. Johnson, D (1961)  
(Vacant) (Special election to  
be held)

**UTAH**

Arthur V. Watkins, R (1959)  
\*Wallace F. Bennett, R (1963)

**VERMONT**

\*George D. Aiken, R (1963)  
Ralph E. Flanders, R (1959)

**VIRGINIA**

Harry Flood Byrd, D (1959)  
A. Willis Robertson, D (1961)

**WASHINGTON**

\*Warren G. Magnuson, D  
(1963)

Henry M. Jackson, D (1959)

**WEST VIRGINIA**

Matthew M. Neely, D (1961)  
Chapman Revercomb, R (1959)

**WISCONSIN**

\*Alexander Wiley, R (1963)  
Joseph R. McCarthy, R (1959)

**WYOMING**

Frank A. Barrett, R (1959)  
Joseph O'Mahoney, D (1961)

**CONGRESSIONAL COMMITTEES****Committees of the Senate****Agriculture and Forestry (15)**

*Chairman:* Allen J. Ellender, Sr. (La.)  
*Ranking Rep.:* George D. Aiken (Vt.)

**Appropriations (23)**

*Chairman:* Carl Hayden (Ariz.)  
*Ranking Rep.:* Styles Bridges (N. H.)

**Armed Services (15)**

*Chairman:* Richard B. Russell (Ga.)  
*Ranking Rep.:* Leverett Saltonstall (Mass.)

**Banking and Currency (15)**

*Chairman:* J. W. Fulbright (Ark.)  
*Ranking Rep.:* Homer E. Capehart (Ind.)

**District of Columbia (9)**

*Chairman:* Matthew M. Neely, (W. Va.)  
*Ranking Rep.:* J. Glenn Beall (Md.)

**Finance (15)**

*Chairman:* Harry Flood Byrd (Va.)  
*Ranking Rep.:* Edward Martin (Pa.)

**Foreign Relations (15)**

*Chairman:* Theodore F. Green (R. I.)  
*Ranking Rep.:* Alexander Wiley (Wis.)

**Government Operations (13)**

*Chairman:* John L. McClellan (Ark.)  
*Ranking Rep.:* Joseph R. McCarthy (Wis.)

**Interior and Insular Affairs (15)**

*Chairman:* James E. Murray (Mont.)  
*Ranking Rep.:* George W. Malone (Nev.)

**Interstate and Foreign Commerce (15)**

*Chairman:* Warren G. Magnuson (Wash.)  
*Ranking Rep.:* John W. Bricker (Ohio)

**Judiciary (15)**

*Chairman:* James O. Eastland (Miss.)  
*Ranking Rep.:* Alexander Wiley (Wis.)

**Labor and Public Welfare (13)**

*Chairman:* Lister Hill (Ala.)  
*Ranking Rep.:* H. Alexander Smith (N. J.)

**Post Office and Civil Service (13)**

*Chairman:* Olin D. Johnston (S. C.)  
*Ranking Rep.:* Frank Carlson (Kans.)

**Public Works (13)**

*Chairman:* Thomas C. Hennings, Jr. (Mo.)  
*Ranking Rep.:* Edward Martin (Pa.)

**Rules and Administration (9)**

*Chairman:* Thomas C. Hennings, Jr. (Mo.)  
*Ranking Rep.:* William E. Jenner (Ind.)

**Committees of the House****Agriculture (33)**

*Chairman:* Harold D. Cooley (N. C.)  
*Ranking Rep.:* August H. Andresen (Minn.)

**Appropriations (50)**

*Chairman:* Clarence Cannon (Mo.)  
*Ranking Rep.:* John Taber (N. Y.)

**Armed Services (39)**

*Chairman:* Carl Vinson (Ga.)  
*Ranking Rep.:* Dewey Short (Mo.)

**Banking and Currency (30)**

*Chairman:* Brent Spence (Ky.)  
*Ranking Rep.:* Henry O. Talle (Iowa)

**District of Columbia (25)**

*Chairman:* John L. McMillan (S. C.)  
*Ranking Rep.:* Sid Simpson (Ill.)

**Education and Labor (28)**

*Chairman:* Graham A. Barden (N. C.)  
*Ranking Rep.:* S. K. McConnell, Jr. (Pa.)

**Foreign Affairs (30)**

*Chairman:* Thomas S. Gordon (Ill.)  
*Ranking Rep.:* Robert B. Chipfield (Ill.)

**Government Operations (30)**

*Chairman:* William L. Dawson (Ill.)  
*Ranking Rep.:* Clare E. Hoffman (Mich.)

**House Administration (25)**

*Chairman:* Omar Burleson (Tex.)  
*Ranking Rep.:* Karl M. LeCompte (Iowa)

**Interior and Insular Affairs (30)**

*Chairman:* Clair Engle (Calif.)  
*Ranking Rep.:* A. L. Miller (Nebr.)

**Interstate and Foreign Commerce (31)**

*Chairman:* Oren Harris (Ark.)  
*Ranking Rep.:* Charles A. Wolverton (N. J.)

**Judiciary (30)**

*Chairman:* Emanuel Celler (N. Y.)  
*Ranking Rep.:* Kenneth B. Keating (N. Y.)

**Merchant Marine and Fisheries (30)**

*Chairman:* Herbert C. Bonner (N. C.)  
*Ranking Rep.:* Thor C. Tollefson (Wash.)

**Post Office and Civil Service (25)**

*Chairman:* Tom Murray (Tenn.)  
*Ranking Rep.:* Edward H. Rees (Kans.)

**Public Works (29)**

*Chairman:* Charles A. Buckley (N. Y.)  
*Ranking Rep.:* J. Harry McGregor (Ohio)

**Rules (12)**

*Chairman:* Howard W. Smith (Va.)  
*Ranking Rep.:* Leo E. Allen (Ill.)

**Un-American Activities (9)**

*Chairman:* Francis E. Walter (Pa.)  
*Ranking Rep.:* Bernard W. Kearney (N. Y.)

**Veterans' Affairs (28)**

*Chairman:* Olin E. Teague (Tex.)  
*Ranking Rep.:* Edith Nourse Rogers (Mass.)

**Ways and Means (25)**

*Chairman:* Jere Cooper (Tenn.)  
*Ranking Rep.:* Daniel A. Reed (N. Y.)



## THE HOUSE OF REPRESENTATIVES

The apportionment based on the Seventeenth Census (1950) distributes the 435 seats in the House among the states according to the method of equal proportions. By this method the per cent difference between the average number of Representatives per million people in any 2 states is made as small as possible. Also, the per cent difference between the average districts, i.e., the average number of persons per Representative, in any 2 states is made as small as possible. By equalizing the representation of all pairs of states, the method gives as nearly equal representation as possible to all states in proportion to their population.

The numerals indicate the Congressional Districts of the states, and the designation At-L means At-Large. An asterisk (\*) indicates that the Congressman was returned to office in the 1956 elections. The terms of all Representatives end January, 1959.

### ALABAMA

(9 Representatives)

1. \*Frank W. Boykin, D
2. \*George M. Grant, D
3. \*George W. Andrews, D
4. \*Kenneth A. Roberts, D
5. \*Albert Rains, D
6. \*Armistead I. Selden, D
7. \*Carl Elliott, D
8. \*Robert E. Jones, Jr., D
9. \*George Huddleston, Jr., D

### ARIZONA

(2 Representatives)

1. \*John J. Rhodes, R
2. \*Stewart L. Udall, D

### ARKANSAS

(6 Representatives)

1. \*E. C. Gathings, D
2. \*Wilbur D. Mills, D
3. \*James W. Trimble, D
4. \*Oren Harris, D
5. \*Brooks Hays, D
6. \*W. F. Norrell, D

### CALIFORNIA

(30 Representatives)

1. \*Hubert B. Scudder, R
2. \*Clair Engle, D, R
3. \*John E. Moss, D
4. \*William S. Mailliard, R
5. \*John F. Shelley, D, R
6. \*John F. Baldwin, Jr., R
7. \*John J. Allen, Jr., R
8. \*George P. Miller, D
9. \*J. Arthur Younger, R
10. \*Charles S. Gubser, R
11. John J. McFall, D
12. \*B. F. Sisk, D
13. \*Charles M. Teague, R
14. \*Harlan Hagen, D
15. \*Gordon L. McDonough, R
16. \*Donald L. Jackson, R
17. \*Cecil R. King, D
18. \*Craig Hosmer, R
19. \*Chet Holifield, D
20. H. Allen Smith, R
21. \*Edgar W. Hiestand, R
22. \*Joe Holt, R
23. \*Clyde Doyle, D
24. \*Glenard P. Lipscomb, R
25. \*Patrick J. Hillings, R
26. \*James Roosevelt, D
27. \*Harry R. Sheppard, D, R
28. \*James B. Utt, R
29. D. S. Saund, D
30. \*Bob Wilson, R

### COLORADO

(4 Representatives)

1. \*Byron G. Rogers, D
2. \*William S. Hill, R
3. \*J. Edgar Chenoweth, R
4. \*Wayne N. Aspinall, D

### CONNECTICUT

(6 Representatives)

1. Edwin H. May, Jr., R
2. \*Horace Seely-Brown, Jr., R
3. \*Albert W. Cretella, R
4. \*Albert P. Morano, R
5. \*James T. Patterson, R
- At-L. \*Antoni N. Sadlak, R

### DELAWARE

(1 Representative)

- At-L. Harry G. Haskell, Jr., R

### FLORIDA

(8 Representatives)

1. \*William C. Cramer, R
2. \*Charles E. Bennett, D
3. \*Robert L. F. Sikes, D
4. \*Dante B. Fascell, D
5. (Returns incomplete)
6. \*Paul G. Rogers, D
7. \*James A. Haley, D
8. \*D. R. Matthews, D

### GEORGIA

(10 Representatives)

1. \*Prince H. Preston, D
2. \*John L. Pilcher, D
3. \*E. L. Forrester, D
4. \*John James Flynt, Jr., D
5. \*James C. Davis, D
6. \*Carl Vinson, D
7. \*Henderson Lanham, D
8. \*Mrs. Iris F. Blitch, D
9. \*Phil M. Landrum, D
10. \*Paul Brown, D

### IDAHO

(2 Representatives)

1. \*Mrs. Gracie Pfost, D
2. \*Hamer H. Budge, R

### ILLINOIS

(25 Representatives)

1. \*William L. Dawson, D
2. \*Barrett O'Hara, D
3. Emmet F. Byrne, R

4. \*William E. McVey, R

5. \*John C. Kluczynski, D

6. \*Thomas J. O'Brien, D

7. \*James B. Bowler, D

8. \*Thomas S. Gordon, D

9. \*Sidney R. Yates, D

10. Harold R. Collier, R

11. \*Timothy P. Sheehan, R

12. \*Charles A. Boyle, D

13. \*Mrs. Marguerite Stitt

Church, R

14. Russell W. Keeney, R

15. \*Noah M. Mason, R

16. \*Leo E. Allen, R

17. \*Leslie C. Arends, R

18. Robert H. Michel, R

19. \*Robert B. Chipfield, R

20. \*Sid Simpson, R

21. \*Peter F. Mack, Jr., D

22. \*William L. Springer, R

23. \*Charles W. Vursell, R

24. \*Melvin Price, D

25. \*Kenneth J. Gray, D

### INDIANA

(11 Representatives)

1. \*Ray J. Madden, D
2. \*Charles A. Halleck, R
3. F. Jay Nimitz, R
4. \*E. Ross Adair, R
5. \*John V. Beamer, R
6. \*Mrs. Cecil M. Harden, R
7. \*William G. Bray, R
8. D. Bailey Merrill, R
9. \*Earl Wilson, R
10. \*Ralph Harvey, R
11. \*Charles B. Brownson, R

### IOWA

(8 Representatives)

1. \*Fred Schwengel, R
2. \*Henry O. Talle, R
3. \*H. R. Gross, R
4. \*Karl M. LeCompte, R†
5. \*Paul Cunningham, R
6. Merwin Coad, D
7. \*Ben F. Jensen, R
8. \*Charles B. Hoeven, R

### KANSAS

(6 Representatives)

1. \*William H. Avery, R
2. \*Errett P. Scrivner, R
3. \*Myron V. George, R
4. \*Edward H. Rees, R
5. J. Floyd Breeding, D
6. \*Wint Smith, R

†Subject to recount.

**KENTUCKY**

(8 Representatives)

1. \*Noble J. Gregory, D
2. \*William H. Natcher, D
3. \*John M. Robison, Jr., R
4. \*Frank Chelf, D
5. \*Brent Spence, D
6. \*John C. Watts, D
7. (Returns Incomplete)
8. \*Eugene Siler, R

**LOUISIANA**

(8 Representatives)

1. \*F. Edward Hebert, D
2. \*Hale Boggs, D
3. \*Edwin E. Wills, D
4. \*Overton Brooks, D
5. \*Otto E. Passman, D
6. \*James H. Morrison, D
7. \*T. Ashton Thompson, D
8. \*George S. Long, D

**MAINE**

(3 Representatives)

1. \*Robert Hale, R
2. \*Frank M. Coffin, D
3. \*Clifford G. McIntire, R

**MARYLAND**

(7 Representatives)

1. \*Edward T. Miller, R
2. \*James P. S. Devereux, R
3. \*Edward A. Garmatz, D
4. \*George H. Fallon, D
5. \*Richard E. Lankford, D
6. \*DeWitt S. Hyde, R
7. \*Samuel N. Friedel, D

**MASSACHUSETTS**

(14 Representatives)

1. \*John W. Heselton, R
2. \*Edward P. Boland, D
3. \*Philip J. Philbin, D
4. \*Harold D. Donahue, D
5. \*Mrs. Edith Nourse Rogers, R
6. \*William H. Bates, R
7. \*Thomas J. Lane, D
8. \*Torbert H. Macdonald, D
9. \*Donald W. Nicholson, R
10. \*Laurence Curtis, R
11. \*Thomas P. O'Neill, Jr., D
12. \*John W. McCormack, D
13. \*Richard B. Wigglesworth, R
14. \*Joseph W. Martin, Jr., R

**MICHIGAN**

(18 Representatives)

1. \*Thaddeus M. Machrowicz, D
2. \*George Meader, R
3. \*August E. Johansen, R
4. \*Clare E. Hoffman, R
5. \*Gerald R. Ford, Jr., R
6. \*Charles E. Chamberlain, R
7. \*Robert J. McIntosh, R
8. \*Alvin M. Bentley, R
9. \*Robert P. Griffin, R
10. \*Elford A. Cederberg, R

11. \*Victor A. Knox, R
12. \*John B. Bennett, R
13. \*Charles C. Diggs, Jr., D
14. \*Louis C. Rabaut, D
15. \*John D. Dingell, D
16. \*John Lesinski, D
17. \*Mrs. Martha W. Griffiths, D
18. \*William S. Broomfield, R

**MINNESOTA**

(9 Representatives)

1. \*August H. Andresen, R
2. \*Joseph P. O'Hara, R
3. \*Roy W. Wier, D
4. \*Eugene J. McCarthy, D
5. \*Walter H. Judd, R
6. \*Fred Marshall, D
7. \*H. Carl Andersen, R
8. \*John A. Blatnik, D
9. \*Mrs. Coya Knutson, D

**MISSISSIPPI**

(6 Representatives)

1. \*Thomas G. Abernethy, D
2. \*Jamie L. Whitten, D
3. \*Frank E. Smith, D
4. \*John Bell Williams, D
5. \*Arthur Winstead, D
6. \*William M. Colmer, D

**MISSOURI**

(11 Representatives)

1. \*Frank M. Karsten, D
2. \*Thomas B. Curtis, R
3. \*Mrs. John B. Sullivan, D
4. \*George H. Christopher, D
5. \*Richard Bolling, D
6. \*W. R. Hull, Jr., D
7. \*Charles H. Brown, D
8. \*A. S. J. Carnahan, D
9. \*Clarence Cannon, D
10. \*Paul C. Jones, D
11. \*Morgan M. Moulder, D

**MONTANA**

(2 Representatives)

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- \*E. L. (Bob) Bartlett, D  
(Re-elected Oct. 9)

**HAWAII†**

(1 Delegate)

- (Returns incomplete)

**PUERTO RICO†**

- (1 Resident Commissioner)  
(Returns incomplete)

†Does not have vote.



# RELEARNING MATHEMATICS

By

MYRON F. ROSSKOPF

Professor of Mathematics, Teachers College, Columbia University

and

the INFORMATION PLEASE staff

*This section is intended to be a refresher course for parents who are faced with the problem of helping children with their lessons in mathematics. It is primarily for the parent who studied mathematics many years ago but has, inevitably, grown rusty and lacks familiarity with current methods of instruction.*

*Teaching methods today are different in many respects from the methods of the past. This is an important consideration because, too often, well-meaning parents who try to help their children employ methods which are no longer in use. This obviously confuses the child and creates problems for the teacher.*

*We strongly counsel parents who may try to help their children with the aid of this section not to attempt it without proper preparation. You may find, when you turn to our refresher course, that you need a little time to get the hang of it yourself. In other words, don't wait until your boy or girl comes to you with a problem. We suggest that you give yourself a reasonable amount of time in advance to study the entire section and then give special attention to the specific grades that your youngsters are currently attending.*

*While our emphasis is on helping children at school, we have also included instruction on preschool training which will enable you to prepare the four-year-olds, bless them, for kindergarten matriculation.*

*It was our endeavor to provide a simple, concise and useful course in mathematics, which would help not only parents with their children but which would also revive the interest and improve the understanding of any adult.*

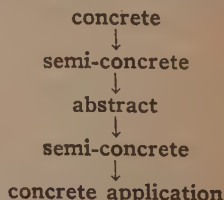
DAN GOLENPAUL, *Editor*

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## A Child's Introduction to Numbers

**A**N INDIVIDUAL in his process of learning is said to go through the same steps as the human race in reaching its present stage of development. Thus, a child's introduction to arithmetic should begin with the *concrete*, that is, actual objects that can be manipulated, felt, handled. The next stage is the *semi-concrete* stage, in which pictures of objects, or diagrams of objects, are used. Even these pictures are arranged in steps, proceeding from pictures of blocks, for example, to pictures of dots. The third stage is the *abstract* stage; here number symbols are used. Then the steps are retraced, ending with the concrete ap-

plication of arithmetic. So, diagrammatically, the process of teaching arithmetic is



It is worth noting that the work is spread over several years in elementary schools. Remember that many operations are car-

rised on each year. Counting, addition, subtraction, multiplication and division are worked on with varying emphasis as the school years follow one another. Number combinations to be memorized as addition facts and those to be memorized as multiplication facts are not taught all in one year. For example, in a first grade, the instruction may go as far as counting to 100

by ones and tens, and learning those addition facts that have a sum of 10. Some few subtraction combinations might be studied. The second grade would go further; each year develops more deeply the work of the past year, studies thoroughly the arithmetic allocated to it, and lays the foundation for development of the arithmetic of the following year.

## PRESCHOOL AND KINDERGARTEN

Each child who comes to school enters kindergarten or first grade with a large fund of arithmetical and mathematical concepts. How large a fund depends upon the extent of his home experiences and the ways in which his parents have aided his developing control of the world about him. Very early a small child has an opportunity to learn the meaning of "larger than," "less than," "part of," "in between," "greater than," "smaller than," "one after the other," "comes after," and other words and phrases that are to become a part of his growing knowledge of mathematics.

Many children come to school already knowing how to count by rote. That is, they can repeat "one, two, three, four, five, six, seven, eight, nine, ten." However, if the counting is by rote, these children will not know the meaning of the number names. If three blocks are held up and a child is asked, "How many blocks are there?" he may make a guess, but he will not be sure. Such a child will not recognize number symbols, nor will he recognize an application of a particular number. Although a teacher will proceed to teach the beginnings of arithmetic in a different manner, there is no harm in a child's being taught to count by rote. In fact, there may be gains for a first grader who can so count, for he will be familiar with the number names and will approach further experiences with more confidence.

It is much better if a preschool child is taught what is called a concept of "two-ness" or "three-ness" or "four-ness." This means that the child acquires the notion

that all groups that can be matched, one to one, with his eyes or ears or hands or feet have a common property, a property that is contained in the word "two." A mother can encourage her child to develop this concept by playing a number game. Pointing to her two eyes, she says "two eyes," touching lightly the two eyes of the child, she says "two eyes," and so on for ears and hands. There comes a day when that child will hold up his shoes and say "two." The child has made a generalization.

Let us return to the important concept mentioned in the preceding paragraph, that of matching groups one to one. Consider the groups of objects below



Do these groups all have the same number? No, they do not. The group of blocks has a larger number because matching one block with the last book, there is one block left over. The group of apples, the group of balls and the group of books do have the same number because they can be matched exactly, one to one. In your home, the concrete objects themselves could be used. The pictures are semi-concrete. As your child learns, the pictures can become more abstract.

## GRADES 1, 2 AND 3

During grades 1, 2 and 3, your child will learn:

- How to count by ones and tens to 1,000.
- How to recognize and write numerals.
- The addition facts and how to do examples as in the adjoining column:

$\begin{array}{r} 12 \\ + 23 \\ \hline 35 \end{array}$	$\begin{array}{r} 76 \\ + 62 \\ \hline 138 \end{array}$	$\begin{array}{r} 237 \\ + 150 \\ \hline 387 \end{array}$	$\begin{array}{r} 581 \\ + 386 \\ \hline 967 \end{array}$
$\begin{array}{r} 3 \\ 6 \\ + 1 \\ \hline 10 \end{array}$	$\begin{array}{r} 83 \\ 10 \\ + 14 \\ \hline 107 \end{array}$	$3 + 2 + 9 + 1 = 15$	

- d. The subtraction facts and how to do examples like

$$\begin{array}{r} 86 \\ - 54 \\ \hline 32 \end{array} \quad \begin{array}{r} 176 \\ - 85 \\ \hline 91 \end{array} \quad \begin{array}{r} 640 \\ - 350 \\ \hline 290 \end{array}$$

- e. Easier multiplication facts and how to do examples like

$$\begin{array}{r} 12 \\ \times 4 \\ \hline 48 \end{array} \quad \begin{array}{r} 70 \\ \times 2 \\ \hline 140 \end{array} \quad \begin{array}{r} 62 \\ \times 4 \\ \hline 248 \end{array}$$

- f. Easier division facts and how to do examples like

$$\begin{array}{r} 3 \\ 6 \overline{)18} \end{array} \quad \begin{array}{r} 101 \\ 6 \overline{)606} \end{array} \quad \begin{array}{r} \$1.11 \\ 8 \overline{)\$8.88} \end{array}$$

- g. Meaning of  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{3}$

- h. Measures like time, inch, foot, yard, quart, pint, pound and so on.

Only rarely would a parent be called upon to teach his child enough about counting so that a knowledge of the structure of our decimal number system would be required. On the other hand, parents are questioned by children, and to be able to explain is far better than to tell an answer. (An explanation of the decimal number system is given on page 42.)

### Help with Addition

During the process of learning how to count, a child can be helped to learn the elements of addition. For example, 4 blocks can be seen as a whole, as 1 and 3, as 3 and 1, and as 2 and 2.



With a small twist in the language used, the results can be stated as "1 block and 3 blocks make 4 blocks," "3 blocks and 1 block make 4 blocks," "2 blocks and 2 blocks make 4 blocks." The next step is to work with the abstract symbols and to write

$$\begin{array}{r} 1 \\ + 3 \\ \hline 4 \end{array} \quad \begin{array}{r} 3 \\ + 1 \\ \hline 4 \end{array} \quad \begin{array}{r} 2 \\ + 2 \\ \hline 4 \end{array}$$

So the *addition facts*, of which these three are examples, are presented for a

child to experience (in the sense of feeling and seeing the resulting group) and to abstract. Of course, a stage is reached at which the addition facts must be learned, mastered or memorized. Such must be the case in order to make finding *sums* more efficient. Addition facts taught at this level are given in the table below.

### Addition Facts

1	1	1	1	1	1	1	1	1	1
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
2	3	4	5	6	7	8	9	10	
2	2	2	2	2	2	2	2	2	2
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
3	4	5	6	7	8	9	10	11	
3	3	3	3	3	3	3	3	3	3
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
4	5	6	7	8	9	10	11	12	
4	4	4	4	4	4	4	4	4	4
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
5	6	7	8	9	10	11	12	13	
5	5	5	5	5	5	5	5	5	5
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
6	7	8	9	10	11	12	13	14	
6	6	6	6	6	6	6	6	6	6
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
7	8	9	10	11	12	13	14	15	
7	7	7	7	7	7	7	7	7	7
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
8	9	10	11	12	13	14	15	16	
8	8	8	8	8	8	8	8	8	8
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
9	10	11	12	13	14	15	16	17	
9	9	9	9	9	9	9	9	9	9
+ 1	+ 2	+ 3	+ 4	+ 5	+ 6	+ 7	+ 8	+ 9	
10	11	12	13	14	15	16	17	18	

Although most children seem to encounter no difficulty with the idea, it is important to bring out that the order in which addition is done does not change the sum. That is,  $4 + 6 = 10$  just as  $6 + 4 = 10$ .



## The Role of "0"

It is understandable that a child may have difficulty appreciating the role of "0" in a number system. It is a subtle and abstract concept. How are you going to help your child when he comes to you with problems like

$$\begin{array}{r} 60 \\ + 6 \\ \hline 66 \end{array} \quad \begin{array}{r} 239 \\ + 150 \\ \hline 389 \end{array} \quad \begin{array}{r} 40 \\ + 52 \\ \hline 92 \end{array} \quad \begin{array}{r} 605 \\ + 274 \\ \hline 879 \end{array}$$

What are you going to say to him? One effective answer seems to be that there is nothing to add in the place where the zero occurs. In the first example, there is nothing to add to the 6 in the ones' place, so a 6 is written in the answer. A similar statement can be made for each of the second and third examples. The zero addition facts are:

0	1	2	3	4	5	6	7	8	9
+0	+0	+0	+0	+0	+0	+0	+0	+0	+0
0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0
+1	+2	+3	+4	+5	+6	+7	+8	+9	
1	2	3	4	5	6	7	8	9	

Certainly it seems preferable to answer the questions of your child concerning zero as simply as possible; often just an example or two is all that is needed.

A difficulty came to the attention of a

mother in connection with a problem like the one in the box on the left side of this column. Her son could not seem to master the process of adding three numbers in a column. She explained to him that

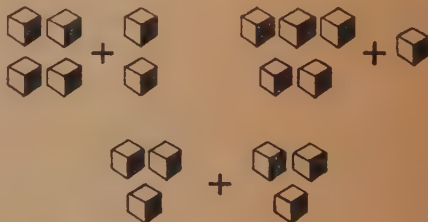
you add the 5 to the 2, getting 7; then you add the 7 to the 6 to get the sum, 13. The youngster observed with a note of dismay in his voice: "Oh, I thought you had to get the sum all at once." Exactly this sort of misunderstanding is common; both parents and children come to look upon arithmetic (or mathematics) as something magical—giving the result all at once. Often a sensible approach to a problem's solution is overlooked because the magic is searched for so diligently. Adding two of the numbers,  $5 + 2$ , and then adding the third number,  $(5 + 2) + 6$ , is the natural way out of the difficulty. No matter how the numbers are grouped, the sums obtained are always the same number.

## Help with Subtraction

Subtraction and addition proceed together in grades 1, 2 and 3. At the time your child is learning how groups are combined, he also learns how to "decompose" or break up a group in different ways. With blocks in two groupings, one of 2 blocks and the other of 4 blocks, a child sees that there are 6 blocks in the



group when the two groups are combined. Encourage him to find different ways in which the group of 6 blocks can be arranged, as



Next, introduce the concept of subtraction with the words "take away." If you take away 2 blocks from the 6 blocks, how many blocks are left? If you take away 4 blocks from the 6 blocks, how many blocks are left? The significance of the minus sign "-" is early related to subtraction.

Just as in the case of addition, by the end of grade 3, there is a table of subtraction facts to be mastered. (See page 32.) For examples like

6	43	809	87
- 6	- 20	- 702	- 30
0	23	107	57

it is just as well to tell your child "when 6 is taken away from 6, write a zero," and "the zero in the other examples shows there is nothing to subtract."

Grade 3 is a busy year in arithmetic. Not only are the tables of addition facts and subtraction facts completed in this year, but carrying and borrowing with

these operations are introduced. Your child learns how to do examples like

439	481	96	750
+ 250	+ 368	- 64	-460
689	849	32	290

As you can see, he learns how to read and write numbers up to 1,000.

Our Number System

Our number system is called the Hindu-Arabic number system because these two peoples are credited historically with introducing the decimal number system and numerals to the western world.

In a number, 9,873, (see below) the place of each numeral indicates its value. In its place the 9 means nine 1,000's; in its place the 8 means eight 100's; in its place the 7 means seven 10's; and in its place the 3 means three 1's. Thus, 9,873 is nine 1,000's plus eight 100's, plus seven 10's, plus three 1's; or, as you read it, nine thousand, eight hundred seventy-three.

You will have noticed that the number system is based on 10; each place represents a certain multiple of 10. That is why the number system is called a decimal number system. Each place as you go from right to left has a value 10 times the value of the place on its immediate right, as illustrated in the chart below.

When a place-value number system is used, there is a great economy in the number of symbols needed to express all the numbers in the system. For example, to express any number in the decimal system, just ten symbols are needed, the digits or figures,

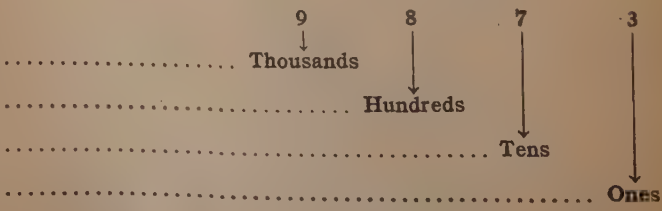
0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

Numbers in the teens are hard for a child to remember. If you teach him that 17, for instance, means 1 ten and 7 ones, gradually he will remember the name "seventeen" along with the meaning in

Subtraction Facts

2	3	4	5	6	7	8	9	10
-1	-1	-1	-1	-1	-1	-1	-1	-1
1	2	3	4	5	6	7	8	9
3	4	5	6	7	8	9	10	11
-2	-2	-2	-2	-2	-2	-2	-2	-2
1	2	3	4	5	6	7	8	9
4	5	6	7	8	9	10	11	12
-3	-3	-3	-3	-3	-3	-3	-3	-3
1	2	3	4	5	6	7	8	9
5	6	7	8	9	10	11	12	13
-4	-4	-4	-4	-4	-4	-4	-4	-4
1	2	3	4	5	6	7	8	9
6	7	8	9	10	11	12	13	14
-5	-5	-5	-5	-5	-5	-5	-5	-5
1	2	3	4	5	6	7	8	9
7	8	9	10	11	12	13	14	15
-6	-6	-6	-6	-6	-6	-6	-6	-6
1	2	3	4	5	6	7	8	9
8	9	10	11	12	13	14	15	16
-7	-7	-7	-7	-7	-7	-7	-7	-7
1	2	3	4	5	6	7	8	9
9	10	11	12	13	14	15	16	17
-8	-8	-8	-8	-8	-8	-8	-8	-8
1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
-9	-9	-9	-9	-9	-9	-9	-9	-9
1	2	3	4	5	6	7	8	9

9873
nine 1000's
eight 100's
seven 10's
three 1's



terms of the decimal number system. The name for 2 tens is "twenty;" then it is 2 tens and 1 one or 21; 2 tens and 2 ones or 22; 2 tens and 3 ones or 23; and so on.

If your child still has some trouble, try using coins. Children become familiar with the values of various coins quite early. Two dimes and three pennies can be arranged to illustrate the 2 tens and 3 ones. When the dimes are exchanged for ten pennies each, then there are 23 pennies; these in turn can be put into two stacks of 10 pennies each and a stack of 3 pennies.

To explain carrying in an example like the adjacent one, go back to what each number means in terms of the decimal number system. You might say, or write,

$$\begin{array}{r} 64 \\ + 28 \\ \hline 92 \end{array}$$

$$\begin{array}{l} 64 = 6 \text{ tens and } 4 \text{ ones} \\ + 28 = 2 \text{ tens and } 8 \text{ ones} \end{array}$$

$$\begin{array}{l} 92 = 8 \text{ tens and } 12 \text{ ones} \\ 92 = 8 \text{ tens and } (1 \text{ ten and } 2 \text{ ones}) \\ 92 = 9 \text{ tens and } 2 \text{ ones} \end{array}$$

Notice that the 12 ones are 1 ten and 2 ones over; so there will be 9 tens and 2 ones in the sum, or 92. Coins can be used as concrete materials to show a child the example.

Two methods of subtraction are taught in the elementary schools of the United States; their names are the *decomposition method* and the *additive method*. (Only one of these two methods is used in any one school system.) Explanations of both methods will be given, since examples for each look exactly alike.

The decomposition method applied to the example below

$$\begin{array}{l} 53 = 4 \text{ tens and } 13 \text{ ones} \\ - 19 = 1 \text{ ten and } 9 \text{ ones} \\ \hline 34 = 3 \text{ tens and } 4 \text{ ones} \end{array}$$

involves using 1 ten from the 5 tens in 53 and changing it to 10 ones; then the 10 ones added to the 3 ones give 13 ones. Now the 9 ones in 19 can be subtracted from the 13 ones, and the remainder is obtained as indicated. Another example is

$$\begin{array}{l} 530 = 4 \text{ hundreds and } 13 \text{ tens} \\ - 260 = 2 \text{ hundreds and } 6 \text{ tens} \\ \hline 270 = 2 \text{ hundreds and } 7 \text{ tens} \end{array}$$

Now let us explain the same two examples in terms of the additive method. In the case of this example in the box on the left, think, "9 plus what number is 13? It is 4; 1 is added to the 1 in 19. Then, 2 plus what number is 5; it is 3. So the remainder is 34." For the second example, in the second left hand box, the thinking is, "since there is nothing to add in 1's place, write zero in the answer. Then, 6 and what number make 13? It is 7. Then, adding the 1 to the 2 in 260, 3 and what number make 5? It is 2. So the remainder is 270."

$$\begin{array}{r} 53 \\ - 19 \\ \hline 34 \end{array}$$

$$\begin{array}{r} 530 \\ - 260 \\ \hline 270 \end{array}$$

## Multiplication

Multiplication is described as a short way of doing addition, in which all the numbers to be added are the same.

That is, the sum

$$3 + 3 + 3 + 3 + 3 = 15$$

is read "five 3's is 15" or "5 times 3 is 15;" written in the shorthand of multiplication, it is  $5 \times 3 = 15$ . In this example, 5 is the multiplier, 3 is the multiplicand, and the result, 15, is the product. Although  $3 \times 5$  yields the same product as  $5 \times 3$ , its meaning is different.

$$3 \times 5 \text{ represents } 5 + 5 + 5$$

$$5 \times 3 \text{ represents } 3 + 3 + 3 + 3 + 3$$

The first number, the multiplier, indicates how many times the second number, the multiplicand, is to be used in the sum. Your child will learn that interchanging two numbers in a multiplication example does not change the product. In fact, this is the method he will use to check his multiplication work.

As in the case of addition and subtraction, there are multiplication facts—you probably call them "tables"—to be discovered, understood and mastered. The reason for mastering the multiplication facts, like the addition and subtraction facts, is to increase efficiency in working in arithmetic. You will notice that the "times tables" presented in grade 3 are not complete. The tables are completed in grade 4 where further work in multiplication is done. The grade 3 portion of the table is in bold-face, the portion learned



in the next grade is in light-face type and a rule divides them:

### Multiplication Facts

$\begin{array}{r} 1 \\ \times 2 \\ \hline 2 \end{array}$	$\begin{array}{r} 1 \\ \times 3 \\ \hline 3 \end{array}$	$\begin{array}{r} 1 \\ \times 4 \\ \hline 4 \end{array}$	$\begin{array}{r} 1 \\ \times 5 \\ \hline 5 \end{array}$	$\begin{array}{r} 1 \\ \times 6 \\ \hline 6 \end{array}$	$\begin{array}{r} 1 \\ \times 7 \\ \hline 7 \end{array}$	$\begin{array}{r} 1 \\ \times 8 \\ \hline 8 \end{array}$	$\begin{array}{r} 1 \\ \times 9 \\ \hline 9 \end{array}$
$\begin{array}{r} 2 \\ \times 2 \\ \hline 4 \end{array}$	$\begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array}$	$\begin{array}{r} 2 \\ \times 4 \\ \hline 8 \end{array}$	$\begin{array}{r} 2 \\ \times 5 \\ \hline 10 \end{array}$	$\begin{array}{r} 2 \\ \times 6 \\ \hline 12 \end{array}$	$\begin{array}{r} 2 \\ \times 7 \\ \hline 14 \end{array}$	$\begin{array}{r} 2 \\ \times 8 \\ \hline 16 \end{array}$	$\begin{array}{r} 2 \\ \times 9 \\ \hline 18 \end{array}$
$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array}$	$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array}$	$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array}$	$\begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array}$	$\begin{array}{r} 3 \\ \times 6 \\ \hline 18 \end{array}$	$\begin{array}{r} 3 \\ \times 7 \\ \hline 21 \end{array}$	$\begin{array}{r} 3 \\ \times 8 \\ \hline 24 \end{array}$	$\begin{array}{r} 3 \\ \times 9 \\ \hline 27 \end{array}$
$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$	$\begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array}$	$\begin{array}{r} 4 \\ \times 4 \\ \hline 16 \end{array}$	$\begin{array}{r} 4 \\ \times 5 \\ \hline 20 \end{array}$	$\begin{array}{r} 4 \\ \times 6 \\ \hline 24 \end{array}$	$\begin{array}{r} 4 \\ \times 7 \\ \hline 28 \end{array}$	$\begin{array}{r} 4 \\ \times 8 \\ \hline 32 \end{array}$	$\begin{array}{r} 4 \\ \times 9 \\ \hline 36 \end{array}$
$\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$	$\begin{array}{r} 5 \\ \times 3 \\ \hline 15 \end{array}$	$\begin{array}{r} 5 \\ \times 4 \\ \hline 20 \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline 25 \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline 30 \end{array}$	$\begin{array}{r} 5 \\ \times 7 \\ \hline 35 \end{array}$	$\begin{array}{r} 5 \\ \times 8 \\ \hline 40 \end{array}$	$\begin{array}{r} 5 \\ \times 9 \\ \hline 45 \end{array}$
$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array}$	$\begin{array}{r} 6 \\ \times 3 \\ \hline 18 \end{array}$	$\begin{array}{r} 6 \\ \times 4 \\ \hline 24 \end{array}$	$\begin{array}{r} 6 \\ \times 5 \\ \hline 30 \end{array}$	$\begin{array}{r} 6 \\ \times 6 \\ \hline 36 \end{array}$	$\begin{array}{r} 6 \\ \times 7 \\ \hline 42 \end{array}$	$\begin{array}{r} 6 \\ \times 8 \\ \hline 48 \end{array}$	$\begin{array}{r} 6 \\ \times 9 \\ \hline 54 \end{array}$
$\begin{array}{r} 7 \\ \times 2 \\ \hline 14 \end{array}$	$\begin{array}{r} 7 \\ \times 3 \\ \hline 21 \end{array}$	$\begin{array}{r} 7 \\ \times 4 \\ \hline 28 \end{array}$	$\begin{array}{r} 7 \\ \times 5 \\ \hline 35 \end{array}$	$\begin{array}{r} 7 \\ \times 6 \\ \hline 42 \end{array}$	$\begin{array}{r} 7 \\ \times 7 \\ \hline 49 \end{array}$	$\begin{array}{r} 7 \\ \times 8 \\ \hline 56 \end{array}$	$\begin{array}{r} 7 \\ \times 9 \\ \hline 63 \end{array}$
$\begin{array}{r} 8 \\ \times 2 \\ \hline 16 \end{array}$	$\begin{array}{r} 8 \\ \times 3 \\ \hline 24 \end{array}$	$\begin{array}{r} 8 \\ \times 4 \\ \hline 32 \end{array}$	$\begin{array}{r} 8 \\ \times 5 \\ \hline 40 \end{array}$	$\begin{array}{r} 8 \\ \times 6 \\ \hline 48 \end{array}$	$\begin{array}{r} 8 \\ \times 7 \\ \hline 56 \end{array}$	$\begin{array}{r} 8 \\ \times 8 \\ \hline 64 \end{array}$	$\begin{array}{r} 8 \\ \times 9 \\ \hline 72 \end{array}$
$\begin{array}{r} 9 \\ \times 2 \\ \hline 18 \end{array}$	$\begin{array}{r} 9 \\ \times 3 \\ \hline 27 \end{array}$	$\begin{array}{r} 9 \\ \times 4 \\ \hline 36 \end{array}$	$\begin{array}{r} 9 \\ \times 5 \\ \hline 45 \end{array}$	$\begin{array}{r} 9 \\ \times 6 \\ \hline 54 \end{array}$	$\begin{array}{r} 9 \\ \times 7 \\ \hline 63 \end{array}$	$\begin{array}{r} 9 \\ \times 8 \\ \hline 72 \end{array}$	$\begin{array}{r} 9 \\ \times 9 \\ \hline 81 \end{array}$

At the third grade level, if your child asks what to do about a zero in a multiplication example, use an illustration as the one immediately below:

$$\begin{array}{r} 60 \\ \times 7 \\ \hline 420 \end{array}$$

Tell him there is nothing to multiply where the zero is; so put a zero in the answer.

### Division

If your child comes to you and says he does not know how to do his division examples, it is wise to read carefully those pages in his arithmetic book that discuss division. Most parents have forgotten how they learned division; they remember only the process. Besides, division is developed in today's textbooks quite differently from even a few years ago.

Usually, the idea of division is introduced by means of a problem like the following:

Tom had 14 stamps. He put 2 stamps in each group. How many groups did he have? How many 2's are there in 14?

Tom put the 14 stamps in 7 groups of 2 each. There are seven 2's in 14. This is a way to divide 14 by 2. A way to write a division example is

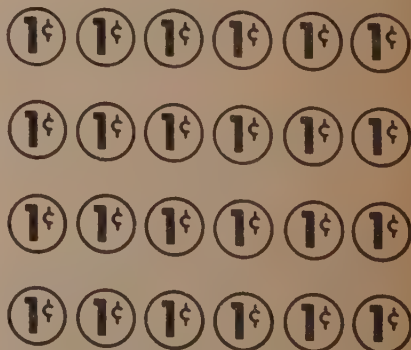
$$\begin{array}{r} 7 \\ 2 \overline{)14} \end{array}$$

The 7 is written above the 4 in 14 to show that 14, not 1, is divided by 2.

After some practice with the foregoing idea of division, to find how many groups there are when the number in each group is known, the second idea in division is introduced by means of problems of this sort:

Mary paid 24 cents for 4 candy bars. How much did each candy bar cost?

The 24 cents can be put into 4 groups:



How many cents are there in each group? What is one-fourth of 24 cents? One-fourth is written  $\frac{1}{4}$ . The example can be written as

$$\frac{1}{4} \text{ of } 24 \text{ is } 6; \text{ or } \frac{1}{4} \text{ of } 24 = 6; \text{ or } 4 \overline{)24}$$

You can see that groups of things are divided into equal parts, or fractions.

Gradually, enough division facts in grade 3 are practiced until those printed in bold-face type in the following table are mastered; the portion learned in the next grade (Grade 4) is in light-face type and a rule divides them:

### Division Facts

<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>2)2</b>	<b>3)3</b>	<b>4)4</b>	<b>5)5</b>	<b>6)6</b>	<b>7)7</b>	<b>8)8</b>	<b>9)9</b>
<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>2)4</b>	<b>3)6</b>	<b>4)8</b>	<b>5)10</b>	<b>6)12</b>	<b>7)14</b>	<b>8)16</b>	<b>9)18</b>
<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>2)6</b>	<b>3)9</b>	<b>4)12</b>	<b>5)15</b>	<b>6)18</b>	<b>7)21</b>	<b>8)24</b>	<b>9)27</b>
<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
<b>2)8</b>	<b>3)12</b>	<b>4)16</b>	<b>5)20</b>	<b>6)24</b>	<b>7)28</b>	<b>8)32</b>	<b>9)36</b>
<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>2)10</b>	<b>3)15</b>	<b>4)20</b>	<b>5)25</b>	<b>6)30</b>	<b>7)35</b>	<b>8)40</b>	<b>9)45</b>
<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>2)12</b>	<b>3)18</b>	<b>4)24</b>	<b>5)30</b>	<b>6)36</b>	<b>7)42</b>	<b>8)48</b>	<b>9)54</b>
<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
<b>2)14</b>	<b>3)21</b>	<b>4)28</b>	<b>5)35</b>	<b>6)42</b>	<b>7)49</b>	<b>8)56</b>	<b>9)63</b>
<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>
<b>2)16</b>	<b>3)24</b>	<b>4)32</b>	<b>5)40</b>	<b>6)48</b>	<b>7)56</b>	<b>8)64</b>	<b>9)72</b>
<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
<b>2)18</b>	<b>3)27</b>	<b>4)36</b>	<b>5)45</b>	<b>6)54</b>	<b>7)63</b>	<b>8)72</b>	<b>9)81</b>

As early as the first grade, children are introduced to the concept of a fraction.

Some children enter school with a vague idea of one-half and one-fourth; their idea is vague because they do not fully realize that one-half of something means one of its two equal parts; one-fourth of something means one of its four equal parts.

Usually in the first and second grades, language and ideas are stressed in the work with fractions. However, children do learn that one-half of a candy bar means one of its two equal parts; one-third of a sack of 12 marbles is one of its three equal parts or 4 marbles; one-fourth of the 20 children in the group means one of the group's four equal parts or 5 children. With such experiences children are made familiar with this new kind of number, a fraction. It is in the third grade that the three fractions are written as  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{3}$ . Up until that time, the word names "one-half," "one-fourth" and "one-third" are used.

Nothing has been said up to this point concerning approaches to help your child solve problems stated in words. All the way through an arithmetic program, word problems (or verbal problems) are presented for solution. These verbal problems are applications of the arithmetic processes studied, to situations that are within the experience of your child at a given age level and that, it is hoped, will prove interesting to him. All the verbal problems are carefully checked to see that the vocabulary used is within the reading ability and comprehension of youngsters at their stage of progress in school. The data used are realistic, the problems are couched in reasonable language, and the results are sensible.

## GRADES 4, 5 AND 6

During the fourth, fifth and sixth grades, four areas of arithmetic receive most emphasis: (a) multiplication with carrying; (b) long division; (c) operations with fractions; and (d) operations with decimal numbers. Your son or daughter will learn many new things in arithmetic in addition to keeping up and extending his knowledge of operations with whole numbers. Among the new things which are learned are the following:

- (a) Reading and writing numbers up to billions, 18,567,191,654 or eighteen billion, five hundred sixty-seven million, one hundred ninety-one thousand, six hundred fifty-four

- (b) Adding or subtracting three- and four-place numbers

$$\begin{array}{r} 678 \\ + 957 \\ \hline 1635 \end{array} \qquad \begin{array}{r} 8905 \\ - 3786 \\ \hline 5119 \end{array}$$

- (c) Multiplication with carrying and with two- and three-place multipliers

$$\begin{array}{r} 893 \\ \times 7 \\ \hline 6251 \end{array} \qquad \begin{array}{r} 4065 \\ \times 36 \\ \hline 24390 \\ 12195 \\ \hline 146340 \end{array} \qquad \begin{array}{r} 9123 \\ \times 576 \\ \hline 54738 \\ 63861 \\ 45615 \\ \hline 5254848 \end{array}$$

- (d) Long division with one-, two- and three-place divisors (also short division)

228	4 R4	38 R59	617 R5
3)684	23)96	418)15943	7)4324
6	92	1254	
8	4	3403	
6		3344	
24		59	

- (e) Addition, subtraction, multiplication and division of fractions

Addition

$$\begin{array}{r} 4\frac{1}{8} \\ + 2\frac{3}{4} \\ \hline 6\frac{7}{8} \end{array}$$

Subtraction

$$\begin{array}{r} 5\frac{2}{3} \\ - 2\frac{1}{6} \\ \hline 3\frac{1}{2} \end{array}$$

Multiplication

$$\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$$

Division

$$3\frac{2}{3} \div \frac{1}{3} = \frac{27}{8} \times \frac{3}{1} = \frac{81}{8} \text{ or } 10\frac{1}{8}$$

- (f) Addition, subtraction, multiplication and division of decimal numbers

123.14	82.57	83.4	4 40
8.05	- 57.93	× 4.5	.19)83.67
+ 27.92			76
159.11	24.64	4170	76
		3336	76
		375.30	7

### Further Work in Addition

The further work in addition of the fourth, fifth and sixth grades is just an elaboration of the fundamental ideas that were developed in the previous grades. Extended column addition and addition of numbers with three, four, five or more digits, as in the following examples:

346	672,105
709	+ 937,816
813	
+ 577	
2,445	1,609,921

involve the same processes, the same understandings and the same addition facts as those discussed in the section dealing with the arithmetic of grades 1, 2 and 3. A lack of mastery of the addition facts is most often the cause of trouble for a child in the upper grades. If your child understands addition, then mastery can be achieved by drill. If your child does not understand addition as a process of

combining groups, then use coins or objects to reteach him this basic idea.

In case of any trouble, a pupil can go back to what the numbers mean in terms of the decimal system. The point is that a child should be equipped with a set of concepts concerning the number system with which he can fight his own way out of difficulty. Resourcefulness and thinking are worthy of emphasis.

Some language of a strictly arithmetical nature is introduced in these years when a

addend	53
addend	+ 89
sum	142

class seems to be ready for it. The words that are used are illustrated in the box on the left.

Although in arithmetic there is much technical language, only those words are used today that will make talking about a problem easier and simpler than the circumlocutions that otherwise would have to be used.

### Further Work in Subtraction

Subtraction builds on what has gone before—a statement that is true of each

of the arithmetic operations. Names

minuend	37
subtrahend	- 15
difference	22

are given to the numbers in a subtraction example, as shown. The difference also is called the remainder, and children get used to using the two words interchangeably. Any difficulty when large numbers are subtracted can be explained in terms of a simple example like the one shown.

In the upper grades you will find your child spending much time on checking his work. These are the years when checking, in order to be sure of accuracy, is stressed.

Addition is checked by first adding a column down and then adding it up to see if the same number is obtained for the sum.

Add	82	↑	Add
down	23	↓	up
	45	67	
	217		

Subtraction is checked by adding the remainder, or difference, to the subtrahend. The sum should be the minuend.

823.4	minuend	567.9
- 567.9	← subtrahend →	255.5
255.5	← remainder →	823.4



### Further Work in Multiplication

Grade 4 is the year in which the times tables are completed through 9's. An example like " $9 \times 6 = ?$ " is read "nine 6's are what?" at first. You will notice that gradually the multiplication symbol " $\times$ " is introduced and the same example is read "nine times six equals what?"

The multiplication table that appears on page 34 is repeated below, only this time the facts to be learned in grade 4 are printed in bold-face type. The figures in light-face type were previously taught in grade 3:

#### Multiplication Facts

1	1	1	1	1	1	1	1	1
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
2	3	4	5	6	7	8	9	
2	2	2	2	2	2	2	2	2
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
4	6	8	10	12	14	16	18	
3	3	3	3	3	3	3	3	3
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
6	9	12	15	18	21	24	27	
4	4	4	4	4	4	4	4	4
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
8	12	16	20	24	28	32	36	
5	5	5	5	5	5	5	5	5
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
10	15	20	25	30	35	40	45	
6	6	6	6	6	6	6	6	6
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
12	18	24	30	36	42	48	54	
7	7	7	7	7	7	7	7	7
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
14	21	28	35	42	49	56	63	
8	8	8	8	8	8	8	8	8
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
16	24	32	40	48	56	64	72	
9	9	9	9	9	9	9	9	9
$\times 2$	$\times 3$	$\times 4$	$\times 5$	$\times 6$	$\times 7$	$\times 8$	$\times 9$	
18	27	36	45	54	63	72	81	

To go beyond the multiplication tables is to learn to multiply with carrying. In the example

$$\begin{array}{r} 34 \\ \times 6 \\ \hline 204 \end{array}$$

it will help your child if you go through the following steps with him: "Six 4's are 24; write the 4 in the ones' place in the product and carry the 2 tens; 6 times 3 tens is 18 tens; with the 2 tens to carry, there are 20 tens altogether. The product is 204."

The explanation of multiplication with a two digit multiplier like  $25 \times 57$  has changed a great deal in the last few years. The bugbear in such multiplications for a child is remembering to move the second (and each succeeding) partial product to the left, one place. In many school systems, parents will find their children writing multiplication examples like this:

$$\begin{array}{r} 57 \\ \times 25 \\ \hline \text{partial product} \rightarrow 285 \rightarrow 5 \times 57 \\ \text{partial product} \rightarrow 1140 \rightarrow 20 \times 57 \\ \hline 1425 \rightarrow 25 \times 57 \end{array}$$

In the example, the partial products are indicated. Notice that the second partial product,  $20 \times 57 = 1,140$ , is written with a "0" in the ones' place. This is done to emphasize that the multiplication is by 2 tens. Later the example would be written in the usual way, omitting the "0"

$$\begin{array}{r} 57 \\ \times 25 \\ \hline 285 \\ 114 \\ \hline 1425 \end{array}$$

But occasionally it is wise to ask for an explanation, and you would expect a child to go back to his knowledge of how numbers are written to explain why he moves the second partial product one place to the left; it is because he is multiplying by 2 tens.

### Further Work in Division

It is in grade 4 that the remaining division facts are taught to your child. The facts necessary to fill out the earlier table

appear below in bold-face type, the figures in light-face repeating those learned in grade 3:

### Division Facts

1 1 1 1 1 1 1 1  
2)2 3)3 4)4 5)5 6)6 7)7 8)8 9)9

2 2 2 2 2 2 2 2  
2)4 3)6 4)8 5)10 6)12 7)14 8)16 9)18

3 3 3 3 3 3 3 3  
2)6 3)9 4)12 5)15 6)18 7)21 8)24 9)27

4 4 4 4 4 4 4 4  
2)8 3)12 4)16 5)20 6)24 7)28 8)32 9)36

5 5 5 5 5 5 5 5  
2)10 3)15 4)20 5)25 6)30 7)35 8)40 9)45

6 6 6 6 6 6 6 6  
2)12 3)18 4)24 5)30 6)36 7)42 8)48 9)54

7 7 7 7 7 7 7 7  
2)14 3)21 4)28 5)35 6)42 7)49 8)56 9)63

8 8 8 8 8 8 8 8  
2)16 3)24 4)32 5)40 6)48 7)56 8)64 9)72

9 9 9 9 9 9 9 9  
2)18 3)27 4)36 5)45 6)54 7)63 8)72 9)81

Most parents will find it difficult to help their children with long division, for all they can do is to tell them how to do a problem; they cannot explain the method so as to help a child understand. If you did the example  $28,593 \div 81$ , you would most likely write:

$$\begin{array}{r} 353 \leftarrow \text{quotient} \\ \text{divisor} \rightarrow 81 \overline{)28593} \leftarrow \text{dividend} \\ \underline{243} \\ 429 \\ \underline{405} \\ 243 \\ \underline{243} \end{array}$$

The names **divisor**, **dividend**, **quotient** are shown because an upper elementary school

pupil will know them all and labels are needed for convenience in talking about the numbers in a division example.

Below is the same example written as your child may have seen his teacher explain it.

$$\begin{array}{r} 3 \overline{)28593} \text{ or } 353 \\ \underline{50} \\ 300 \\ 81 \overline{)28593} \\ \underline{24300} \\ 4293 \\ \underline{4050} \\ 243 \\ \underline{243} \end{array}$$

First, think how many 81's are there in 28,593? There are about 300. How did we find there were about 300? We thought, 80 times what number is about 28,000? Or, 8 times what number is about 28? The answer is 3. But 81 times 3 is only 240. To get 24,000, we would have to multiply 80 by 300. Since 81 is contained in 28,593 about 300 times, 300 becomes part of our quotient. Then multiply:  $81 \times 300 = 24,300$ . Now, the product is subtracted from the dividend:  $28,593 - 24,300 = 4,293$ .

In the next step, 4,293 is used as a new dividend. Think, how many 81's are there in 4,293? There are about 50. Since 81 is contained in 4,293 about 50 times, 50 becomes the next part of our quotient. Then multiply:  $81 \times 50 = 4,050$ . The product is subtracted from the new dividend:  $4,293 - 4,050 = 243$ .

For the last step, use 243 as a new dividend. Think, how many 81's are there in 243? There are exactly 3; for upon multiplying, we have  $81 \times 3 = 243$ . Three, then, completes our quotient, which is

$$300 + 50 + 3 = 353$$

The foregoing sort of explanation is effective in helping pupils understand long division with a two- or more place divisor. It gives a reason for the long division form in terms of what children already know about the decimal number system and indicates why the next digit in the divisor is brought down.

Division by a two-digit divisor involves judging the correct quotient figure. Your child will learn to judge a trial quotient figure by the method of rounding the divisor. The following table shows the rule for rounding a two-digit number.

Digit in ones' place	Example	Rounded to	Digit in ones' place	Example	Rounded to
1	31	30	5	35	40
2	32	30	6	36	40
3	33	30	7	37	40
4	34	30	8	38	40
—	—	—	9	39	40

Consider the example  $1,231 \div 27$ , in which the method of rounding is used to judge the trial quotient figure. The divisor 27 is rounded to 30.

$$\begin{array}{r}
 45 \text{ R } 16 \\
 27 \overline{)1231} \\
 \underline{108} \phantom{00} \\
 151 \phantom{00} \\
 \underline{135} \phantom{00} \\
 16
 \end{array}$$

Think, how many 30's in 1,231 or how many 3's in 12; there are 40 thirties or 4 threes. Multiply the 4 by the divisor:  $27 \times 4 = 108$ . The product is subtracted from the part of the dividend used:  $123 - 108 = 15$ . Bring down the 1 and use 151 as a new dividend.

Think, how many 3's in 15; there are 5 threes in 15. Multiply the 5 by the divisor:  $27 \times 5 = 135$ . Subtract the product from the new dividend:  $151 - 135 = 16$ , which is the remainder.

Note that after each subtraction from a part of the dividend, the remainder is smaller than the divisor. If the remainder should turn out to be larger than the divisor, this indicates that the quotient figure is too small.

The foregoing example was deliberately chosen so that judging the trial quotient figure was successful on each first try.

Let us take an example in which the divisor is a number in the troublesome teens. Here we round 17 to 20

$$\begin{array}{r}
 489 \text{ R } 1 \\
 17 \overline{)8314} \\
 \underline{68} \phantom{00} \\
 151 \phantom{00} \\
 \underline{136} \phantom{00} \\
 154 \phantom{00} \\
 \underline{153} \phantom{00} \\
 1
 \end{array}$$

and use it as a trial divisor. Then, 4 is indicated as the first figure of the quotient.

A mental check shows that it is correct. Using 20 to find the second quotient figure leads to 7, but a mental multiplication of  $17 \times 7$  shows 7 to be too small; 8 is correct. Similarly, use of the trial divisor 20 to find the third quotient figure leads to 7, which is incorrect, and 8, which is also incorrect. The correct quotient figure is 9.

Even though the method of rounding the divisor to find a trial quotient figure fails sometimes, at least this method furnishes a child with a systematic attack on the problem. He does not have to depend upon guesses or flashes of insight. On the other hand, practice with long division plus a thoughtful approach to the problem will help to speed up his long division. Slavish devotion to a method of operation is seldom an effective way to solve problems in mathematics.

### Fractions

One way to explain equal fractions to your child is to take strips of paper of the same size.

$\frac{1}{2}$		$\frac{1}{2}$					
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$				
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

Fold one strip into 2 equal parts. Write  $\frac{1}{2}$  on each part.

Fold the second strip into 4 equal parts; write  $\frac{1}{4}$  on each part.

Similarly, divide the third strip into 8 equal parts and write  $\frac{1}{8}$  on each part.

Cut the strips along the folds and fit them together. Take two pieces marked  $\frac{1}{4}$  and one piece marked  $\frac{1}{2}$ . It is clear that the two pieces marked  $\frac{1}{4}$  exactly cover the piece marked  $\frac{1}{2}$ . So,  $\frac{2}{4} = \frac{1}{2}$ .



Replace the  $\frac{1}{4}$  pieces. If a  $\frac{1}{2}$  piece and a  $\frac{1}{4}$  piece are placed on the remaining three  $\frac{1}{4}$  pieces, you see that they exactly cover them. You have

$$\frac{1}{2} + \frac{1}{4} = \frac{3}{4} \quad \text{or} \quad \frac{2}{4} + \frac{1}{4} = \frac{3}{4}$$

since

$$\frac{1}{2} = \frac{2}{4}$$

Similar combinations can be made using the  $\frac{1}{8}$  pieces. With just the three fractions  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ , many examples in addition and subtraction can be shown to your child.

Through exercises and experiences like the preceding, children learn the two generalizations that are used throughout their work with fractions: (a) if both terms of a fraction (numerator and denominator) are multiplied by the same number, the value of the fraction is not changed; (b) if both terms of a fraction are divided by the same number, the value of the fraction is not changed. These rules do not apply when the multiplier or divisor is zero.

$$\frac{2}{3} = \frac{2 \times 3}{3 \times 3} \qquad \frac{12}{15} = \frac{12 \div 3}{15 \div 3}$$

$$= \frac{6}{9} \qquad \qquad \qquad = \frac{4}{5}$$

The *terms* of a fraction are the numerator and denominator, indicated in the example

13 ← numerator

17 ← denominator

A proper fraction is one whose numerator is smaller than its denominator. Examples are

$$\frac{1}{2} \quad \frac{3}{4} \quad \frac{7}{9}$$

An improper fraction has its numerator equal to its denominator or its numerator greater than its denominator. Examples are

$$\frac{2}{2} \quad \frac{4}{3} \quad \frac{9}{9} \quad \frac{13}{4}$$

At a surprisingly early stage mixed numbers, like  $2\frac{1}{4}$ , are introduced, and your boy or girl will learn how to change a mixed number to an improper fraction and an improper fraction to a mixed number. The example given will serve to illustrate several ideas:  $2\frac{1}{4}$  is read "two and one-fourth;"  $2\frac{1}{4}$  means  $2 + \frac{1}{4}$ . To change the mixed number, which is a whole number and a fraction, to

an improper fraction, think of it in this form: "1 is  $\frac{4}{4}$ ; so 2 is  $\frac{8}{4}$ ; then  $2\frac{1}{4}$  is  $\frac{4}{4} + \frac{1}{4}$  or  $\frac{9}{4}$ ." An extension of the process leads to the rule for changing a mixed number to an improper fraction; thus

$$2 + \frac{1}{4} = \frac{2 \times 4}{4} + \frac{1}{4}$$

$$= \frac{(2 \times 4) + 1}{4}$$

$$= \frac{9}{4}$$

To change  $2\frac{1}{4}$  to an improper fraction, you multiply the denominator of the fraction by the whole number,  $2 \times 4 = 8$ ; add the numerator of the fraction,  $8 + 1 = 9$ ; and write the sum over the denominator,  $\frac{9}{4}$ .

To change an improper fraction, like  $\frac{7}{4}$ , to a mixed number, think of it in this form:  $\frac{7}{4}$  is  $\frac{4}{4} + \frac{3}{4}$ ;  $\frac{4}{4}$  is 1; so  $\frac{7}{4}$  is 1 and  $\frac{3}{4}$  or  $1\frac{3}{4}$ . Notice that the steps are the same as the following: divide the numerator of  $\frac{7}{4}$  by the denominator,  $7 \div 4$ , to get the quotient 1 and the remainder 3; so  $\frac{7}{4} = 1\frac{3}{4}$ .

Multiplication of fractions is related to addition at first and begins with multiplication of a fraction by a whole number. For instance,  $6 \times \frac{1}{2}$  is thought of as

$$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$$

that is six  $\frac{1}{2}$ 's or  $\frac{6}{2}$ , which reduces to 3. Then, examples are written:

$$10 \times \frac{1}{2} = \frac{10 \times 1}{2} \qquad \frac{2}{3} \times 4 = \frac{2 \times 4}{3}$$

$$= \frac{10}{2} \text{ or } 5 \qquad \qquad \qquad = \frac{8}{3} \text{ or } 2\frac{2}{3}$$

Cancellation is a shortcut; it is related to reducing fractions to lowest terms before any actual multiplication takes place. A numerator and a denominator are divided by the same number (which cannot be zero, of course). For example

$$\frac{7}{8} \times 12 = \frac{7 \times \cancel{12}^3}{\cancel{8}_2^4}, \text{ dividing 12 and 8 by 4}$$

$$= \frac{21}{2} \text{ or } 10\frac{1}{2}$$

A type of example in multiplication of fractions that is hard for many children is multiplying two mixed numbers

$$3\frac{1}{2} \times 2\frac{2}{3}$$

The first step is to change each mixed num-

ber to an improper fraction,  $3\frac{1}{2} = \frac{7}{2}$  and  $2\frac{2}{3} = \frac{8}{3}$ ; so the example becomes

$$\begin{aligned}\frac{7}{2} \times \frac{8}{3} &= \frac{7 \times \overset{4}{\cancel{8}}}{\underset{1}{\cancel{2}} \times 3} \\ &= \frac{28}{3} \text{ or } 9\frac{1}{3}\end{aligned}$$

You will find your child will have less trouble with his examples in arithmetic if he learns to write his work carefully and neatly. This is particularly true in the subtraction of two fractions when borrowing is necessary

$$\begin{array}{r} 5\frac{1}{2} = 5\frac{5}{10} = 4\frac{15}{10} \\ - 2\frac{3}{5} = 2\frac{6}{10} = 2\frac{6}{10} \\ \hline 2\frac{9}{10} \end{array}$$

First, change the fractions so that they have a common denominator.

Second, notice that  $\frac{6}{10}$  is larger than  $\frac{5}{10}$ , so that you must borrow.

Third, from the 5, 1 is borrowed, reducing 5 to 4; the 1 is changed to  $\frac{10}{10}$  and combined with the  $\frac{5}{10}$  to make  $\frac{15}{10}$  altogether.

Fourth, then the minuend is  $4\frac{15}{10}$ , and the subtraction can proceed as in other examples.

For division of fractions, the rule "invert the divisor and multiply" is still useful, but your child has been taught in school to ask, "Why?" Some help for you in answering that question follows.

Take two strips of paper of the same size; cut one of them into two equal parts; each of these parts is  $\frac{1}{2}$  of the whole strip; there are two  $\frac{1}{2}$ 's in the whole. That is

$$1 \div \frac{1}{2} = 2$$

for to divide 1 by  $\frac{1}{2}$  is to find the two equal parts in the whole. To divide a whole number into fourths is to find its four equal parts; so  $1 \div \frac{1}{4} = 4$ . Now if we have  $2 \div \frac{1}{4}$ , there ought to be twice as many equal parts, or fourths, as there are in one whole; so  $2 \div \frac{1}{4} = 8$ .

This sort of reasoning and practice can be carried on until you encourage your child to look for some better way of doing the

problem, a way that will be more efficient. He may see that in  $2 \div \frac{1}{4}$ , the answer is obtained by multiplying the 4 by 2. How can he indicate that such is the case? By writing

$$\begin{aligned}2 \div \frac{1}{4} &= 2 \times \frac{4}{1} \\ &= \frac{2 \times 4}{1} \\ &= 8\end{aligned}$$

Another way to explain the example is to change both the dividend and the divisor into fractions having a common denominator. Thus,

$$\begin{aligned}2 \div \frac{1}{4} &= \frac{8}{4} \div \frac{1}{4} \\ &= 8 \div 1 \\ &= 8\end{aligned}$$

Since you are finding how many  $\frac{1}{4}$ 's there are in  $\frac{8}{4}$ 's, you divide the numerators,  $8 \div 1 = 8$ .

Similarly, the example  $4 \div \frac{2}{3}$  can be explained in three ways:

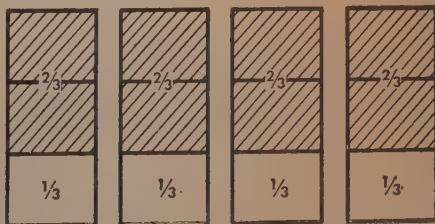
(a) By inverting the divisor and multiplying

$$\begin{aligned}4 \div \frac{2}{3} &= \cancel{4} \times \frac{3}{\cancel{2}} \\ &= 6\end{aligned}$$

(b) By finding a common denominator and dividing numerators

$$\begin{aligned}4 \div \frac{2}{3} &= \frac{12}{3} \div \frac{2}{3} \\ &= 12 \div 2 \\ &= 6\end{aligned}$$

(c) By using a diagram to answer the question, "How many  $\frac{2}{3}$ 's are there in 4?"



Count the number of  $\frac{2}{3}$ 's. There are clearly 4 plus 2 more that are obtained by combining two of the  $\frac{1}{3}$ 's.

All the problems involving division of fractions are merely elaborations or applications of those that have been presented. Always consider a very simple example when trying to explain to a child. Depend upon his intuition and his ability to generalize to make the transition from the simple example to the complex example. Remember that at his level it is often impossible to give a complete explanation. Let your explanation be sufficient for him to understand what he is doing at his level of work.

### Decimals

Toward the end of grade 5, boys and girls study *decimal numbers* like 3.89, 7.5, 1.25 and so on. Numbers like .4, .5, .25 are called *decimal fractions* because they are new names for the common fractions  $\frac{2}{5}$ ,  $\frac{1}{2}$ ,  $\frac{1}{4}$ , respectively. Writing a fraction as a decimal fraction is just a notation device, although a very important and convenient one.

Another name for the common fraction  $\frac{1}{10}$  is .1; another name for  $\frac{1}{100}$  is .01.

Common fraction	Decimal fraction	Common fraction	Equal fraction	Decimal fraction
$\frac{1}{10}$	.1	$\frac{1}{4}$	$\frac{25}{100}$	.25
$\frac{1}{100}$	.01	$\frac{1}{2}$	$\frac{5}{10}$	.5
$\frac{1}{1,000}$	.001	$\frac{3}{4}$	$\frac{75}{100}$	.75
$\frac{1}{10,000}$	.0001	$\frac{7}{8}$	$\frac{875}{1,000}$	.875

Before you convert a fraction to a decimal fraction, you write the fraction with a denominator that is a multiple of 10; thus,  $\frac{2}{5} = \frac{4}{10} = .4$ ;  $\frac{1}{2} = \frac{5}{10} = .5$ ;  $\frac{1}{4} = \frac{25}{100} = .25$ , and so on.

As in the case of whole numbers, decimal numbers are related to the base 10 of our number system. You will recall, (page 32) that in the case of whole numbers, each place as you go from right to left has a value 10 times the value of the

place on its immediate right. Now, if you go from left to right, each place has a value one-tenth the value of the place on its immediate left. After the ones' place—to the right of the decimal point—comes the tenths' place; to the right of tenths are hundredths; to the right of hundredths, thousandths, and so on.

In the number 8,932.5367, the names of the places are indicated in the following diagram. The "." is called the decimal point; it is read "and" when the number name is written or spoken in words. Thus, eight thousand, nine hundred thirty-two and five thousand, three hundred sixty-seven ten-thousandths.

8	9	3	2	.	5	3	6	7
thousands	hundreds	tens	ones		tenths	hundredths	thousandths	ten-thousandths

Addition and subtraction of decimal numbers present no difficulties different from those encountered in working with whole numbers. If you instruct your child to be careful to write an addition or a subtraction example vertically so that decimal points come right below one another, the examples can be carried out just as if the numbers were whole numbers.

Multiplication and division, on the other hand, do involve the problem of placing the decimal point in the answer. Let us consider multiplication first. The example

$$\begin{array}{r} .2 \\ \times 4 \\ \hline .8 \end{array}$$

can be interpreted as  $.2 + .2 + .2 + .2$  or .8; hence, the product is .8 as indicated. The product has the same number of decimal places as the multiplicand. Or, the example can be interpreted as  $4 \times \frac{2}{10} = \frac{8}{10} = .8$ . The result is the same.

In the case of the example

$$\begin{array}{r} .3 \\ \times 7 \\ \hline 2.1 \end{array}$$

we could write  $7 \times .3 = 7 \times \frac{3}{10} = \frac{21}{10} = 2\frac{1}{10}$  or 2.1. Again the product has the same



number of decimal places as the multiplier and.

The next stage is an example in which a whole number is multiplied by a decimal number. Here we have

$$.8 \times 12 = \frac{8}{10} \times 12 = \frac{96}{10} \quad \text{or} \quad 9\frac{6}{10}$$

But  $9\frac{6}{10}$  can be written as 9.6. Hence,

$$\begin{array}{r} 12 \\ \times .8 \\ \hline 9.6 \end{array}$$

The product has the same number of decimal places as the multiplier. The key to explaining to a child the placement of the decimal point in a product is the choice of small numbers with which to work. The generalization—that the product of a whole number and a decimal number has the same number of decimal places as the decimal number—should be established with small numbers before going on to examples involving large numbers.

In the case of multiplication of two decimal numbers, compare the two ways of writing the example:

$$\begin{array}{l} 1.2 \times 3.1 = 1\frac{2}{10} \times 3\frac{1}{10} \\ = \frac{12}{10} \times \frac{31}{10} \\ = \frac{372}{100} \quad \text{or} \quad 3.72 \end{array} \quad \begin{array}{r} 3.1 \\ \times 1.2 \\ \hline 62 \\ 31 \\ \hline 3.72 \end{array}$$

From a number of examples of this sort, the generalization is obtained that the product of two decimals has a number of decimal places equal to the sum of the number of decimal places in the multiplier and multiplicand.

Today's practice in arithmetic will see your child learning to divide decimal numbers toward the latter part of the sixth grade. The types of problems that he will encounter come under three headings:

- division of a decimal number by a whole number;
- division of a whole number by a decimal number;
- division of a decimal number by a decimal number.

Illustrations of these three types follow:

(a)	(b)	(c)	
$\begin{array}{r} .03 \\ 4\overline{)12} \end{array}$	$\begin{array}{r} 20 \\ 2\overline{)4} \end{array}$	$\begin{array}{r} 3.4 \\ 2.1\overline{)7.14} \\ \underline{63} \\ 84 \\ \underline{84} \end{array}$	$\begin{array}{r} 80 \\ .31\overline{)24.8} \\ \underline{248} \end{array}$

In example (a), 12 hundredths are divided by 4 ones; so you would expect the answer to be a certain number of hundredths. The answer is 3 hundredths or .03. Your sixth grader will do many examples such as the following:

$$4\overline{)132} \quad 7\overline{)84} \quad 9\overline{)819} \quad 5\overline{)135} \quad 6\overline{)72}$$

After he has learned to do correctly examples involving division of a decimal number by a whole number, he is ready to state the generalization in words:

When a decimal number is divided by a whole number, the quotient has the same number of decimal places as the dividend.

Example (b) asks the question, "How many .2's are there in 4?" There are five .2's in 1; so there must be 4 times as many .2's in 4. That is, there are  $4 \times 5 = 20$  two-tenths in 4. The answer is 20. Notice, when you write out the division example,  $4 \div .2$ , in the usual form,

$$\begin{array}{c} 20 \\ \text{divisor} \rightarrow .2\overline{)4.0} \leftarrow \text{dividend} \end{array}$$

you annex enough zeros so that the dividend has the same number of decimal places as the divisor. Consider the example

$$.3\overline{)42}$$

To find the quotient, first annex zeros to the dividend, 42, so that it has as many decimal places as the divisor; thus, 42.0. Second, divide

$$\begin{array}{r} 140 \\ .3\overline{)42.0} \end{array}$$

The answer, or quotient, is a whole number.

The approach to dividing one decimal number by another decimal number is made in two stages, as was indicated by

the two examples (c). The first example is the following:

$$\begin{array}{r}
 3.4 \leftarrow \text{quotient} \\
 \text{divisor} \rightarrow 2.1 \overline{)7.14} \leftarrow \text{dividend} \\
 \underline{63} \\
 84 \\
 \underline{84} \\
 0
 \end{array}$$

Here the dividend has more decimal places than the divisor. To rationalize the placement of the decimal point in the quotient, you might proceed with your child as in the following way:

Suppose, when you divided and obtained the quotient figures 34, you did not know where to place the decimal point. Now, suppose you decided to check the division to see if doing so would help place the decimal point in the quotient. Your check would look like the following multiplication:

$$\begin{array}{r}
 34 \leftarrow \text{multiplicand (quotient)} \\
 \times 2.1 \leftarrow \text{multiplier (divisor)} \\
 \hline
 34 \\
 68 \\
 \hline
 714 \leftarrow \text{product (dividend)}
 \end{array}$$

If the above product is to equal the dividend 7.14, it must have two decimal places. To secure the number of decimal places in a product, you look at the multiplicand and the multiplier. The sum of their decimal places gives the number of decimal places in the product. How many decimal places must you have in the multiplicand, or quotient, in order that the product or dividend, will have two decimal places? Clearly, you must have one decimal place. So, the correct quotient is 3.4.

Can we make an observation here that will lead to a rule? Let us see. There are 2 decimal places in the dividend; there is 1 decimal place in the divisor; there is 1 decimal place in the quotient;  $2 - 1 = 1$ .

The number of decimal places in the dividend, less the number of decimal places

in the divisor, equals the number of decimal places in the quotient.

Let us apply the foregoing rule in the following example:

$$2.1 \overline{)7.266}$$

The quotient must have  $3 - 1 = 2$  decimal places. Carry out the division and check

Division	Check
3.46	3.46
$2.1 \overline{)7.266}$	$\times 2.1$
<u>63</u>	<u>346</u>
96	692
<u>84</u>	<u>7.266</u>
126	
<u>126</u>	

With the generalization established, that the number of decimal places in a quotient equals the number of decimal places in the dividend less the number of decimal places in the divisor, the second type of example can be dealt with. In the example

$$\text{divisor} \rightarrow .31 \overline{)24.8} \leftarrow \text{dividend}$$

there are more decimal places in the divisor than in the dividend. To avoid this situation, annex zeros to the dividend so that it will have the same number of decimal places as the divisor; then divide and apply the foregoing generalization

$$\begin{array}{r}
 80 \\
 .31 \overline{)24.80} \\
 \underline{248}
 \end{array}$$

The number of decimal places in the quotient is  $2 - 2 = 0$ . The answer is whole number.

To summarize: To place the decimal point in a quotient (a) look at the dividend to see that it has the same number of decimal places as the divisor, or greater number; annex zeros to the dividend if necessary; (b) the difference between the number of decimal places in the dividend and in the divisor is the number of decimal places in the quotient.

## GRADES 7 AND 8

The arithmetic of the first six grades is systematically retaught in grades 7 and 8 and extended to larger numbers, more complex problems and a greater variety

of applications. Any trouble your child encounters during these years with the operations of addition, subtraction, multiplication and division with whole numbers

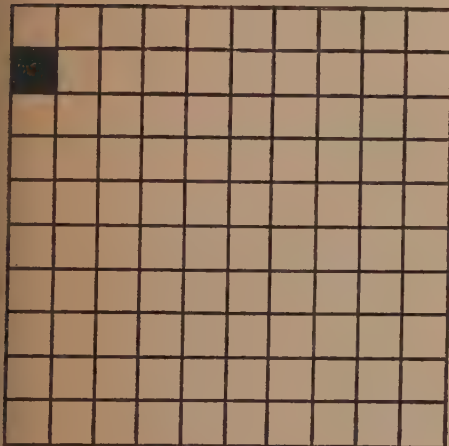
fractions or decimal numbers can be explained in terms of what has already been written. There is no need to repeat the suggestions at this point.

### Percentage Problems

A big, new idea worked on in grades 7 and 8 is *percentage*. "Per cent means hundredths" is the opening sentence of almost all discussions of the subject. Per cent is introduced as a new name for hundredths, a concept already familiar to pupils.

A favorite, and an excellent, illustration of the meaning of per cent is a square divided into a hundred equal smaller squares. There are 100 small equal squares; one square is one hundredth of the larger square, or .01 of the larger square. Per cent means hundredths, so

$$\begin{aligned} 1 \text{ per cent} &= .01 \\ &= \frac{1}{100} \\ &= 1\% \end{aligned}$$



In a similar fashion, using the square, 10 per cent, 25 per cent, 50 per cent, 20 per cent and other common per cents can be illustrated. At the same time you can introduce your child to the decimal fraction and common fraction equivalents for these per cents.

Three words that are used again and again in problems in this topic are *percentage*, *rate* and *base*. In words: The percentage equals the rate times the base.

As a formula, depending upon what is unknown, we have

$$P = R B \quad R = \frac{P}{B} \quad B = \frac{P}{R}$$

or

$$\begin{array}{ccc} \text{Percentage} & \text{Rate} & \text{Base} \\ \downarrow & \downarrow & \downarrow \\ 15 & = 25\% \times & 60 \end{array}$$

The percentage is always a number. It is obtained by applying the rate to the base. Example:

Twenty-five per cent of a meeting of 60 people were men. How many men were present?

$$\begin{aligned} P &= R B \\ &= 25\% \times 60 \\ &= .25 \times 60 \\ &= 15 \end{aligned}$$

There were 15 men present.

In problems involving percentage, the rate is always a certain number of hundredths, a per cent. It is obtained by dividing the percentage by the base. Example:

At a meeting of 60 people there were 15 men. What per cent of the meeting were men?

$$\begin{aligned} R &= \frac{P}{B} \\ &= \frac{15}{60} \\ &= .25 \text{ or } 25\% \end{aligned}$$

25% of the meeting were men.

The base is always a number. It is obtained by dividing the percentage by the rate. Example:

There were 15 men present at a meeting. They formed 25 per cent of the people there. How many people were at the meeting?

$$\begin{aligned} B &= \frac{P}{R} \\ &= \frac{15}{.25} \\ &= 60 \end{aligned}$$

There were 60 people at the meeting.

Typically, problems in percentage are divided into three cases.



**CASE I.**

Find a per cent of a number.

In this type, the rate and the base are given; the percentage must be found. Interest problems are examples of Case I percentage problems. Examples:

1. Find the interest on \$1,000 for one year at a 3 per cent interest rate.

$$\text{Interest} = .03 \times 1,000$$

$$= 30$$

\$30 is the interest for one year.

2. The cost of an item that retails for \$5 is 70 per cent of the retail price.

What is the cost?

$$\text{Cost} = .70 \times 5$$

$$= 3.50$$

Cost is \$3.50

**CASE II.**

Find what per cent one number is of another.

The percentage and the base are given and the rate, or per cent, is to be found. Here you must make clear that the number to be found is a fraction, the fractional part the percentage is of the base. You must divide the percentage by the base. By finding the decimal number equivalent to the fraction, and then writing the decimal number as a per cent, the answer is found. Examples:

1. "9 times out of 10" is a commonly used phrase. What per cent does the phrase represent? Since  $\frac{9}{10} = .90$ , the answer is 90 per cent.
2. A baseball team at one point in the season had won 48 games and lost 26. What was its standing? In this familiar situation every seventh grader seems to know that he must add the games won and the games lost, because a team's standing is on the basis of games won divided by number of games played. So

$$\frac{48}{74} = \frac{24}{37} \quad \text{or} \quad \begin{array}{r} .649 \\ 37 \overline{)24.000} \end{array}$$

since a team's standing is usually given as a three-place decimal. We could say, of course, the team had won 64.9 per cent of its games.

**CASE III.**

Find a number when a per cent of it is known.

The percentage and the rate are given and the base is to be found. The method of solution that your child might use is best illustrated through a problem:

The selling price of a certain article is such that the profit is 25 per cent (of the selling price). Cost of the article is \$5 and the expenses of selling are \$1. What should the selling price be? Cost plus the expenses of selling equals \$6. Since the profit is 25 per cent of the selling price, 100 per cent minus 25 per cent, or 75 per cent, is \$6.

*Solution 1:*

75% of the selling price is \$6

1% of the selling price is

$$\frac{1}{75} \times \$6 = \$ .08$$

100% of the selling price is

$$100 \times \$ .08 = \$ 8$$

*Solution 2:*

75% =  $\frac{3}{4}$  of the selling price is \$6

Find  $\frac{1}{4}$  of the selling price

$$\text{Since } \frac{1}{3} \times \frac{3}{4} = \frac{1}{4},$$

$\frac{1}{4}$  of the selling price

$$\text{is } \frac{1}{3} \times \$6 = \$2$$

$$4 \times \frac{1}{4} = \frac{4}{4} \text{ of the selling price}$$

$$4 \times \$2 = \$8.$$

All percentage problems come under the three cases considered in the preceding paragraphs. Most of the applications made in grades 7 and 8 will be Case I and Case II percentage problems. Gradually, through

$$\frac{2x}{2} = \frac{4}{2}$$
$$x = 2$$

## GRADE 9

During the ninth grade in mathematics, your boy or girl will be busy studying algebra. If you listen to your child's friends, you will hear them describe algebra as the course in which they use  $x$  and  $y$ . The use of symbols to represent numbers may be a ninth grader's first stumbling block in this subject.

### What Symbols Mean

An effective device to help your child understand algebraic symbols is to point out to him the wide use of various symbols in everyday life. A symbol is something that stands for something else. It may be a word, a mark, a letter, a numeral, a sign, an abbreviation, a gesture or any other means of communication that suggests something because of a resemblance, a relationship or a convention. Some symbols are so familiar that we do not think about them at all. The lights at a street intersection, the signals of a traffic policeman, the center line of a highway, are symbols that a driver of a car must interpret correctly.

Your child is already familiar with symbols representing arithmetic processes like "+," "-", "÷," "×," "√." The letters used in algebra stand for numbers. By writing

$$c = np$$

where  $c$  represents the total cost,  $n$  the number of articles bought, and  $p$  the price of each article, we have a formula that summarizes a host of individual problems from arithmetic.

### Directed Numbers, + and -

Very early in the ninth grade your child will be studying *directed numbers*. Through the first eight grades, he has learned to understand and to work with numbers like

$$3; 16; 8,943,891; \frac{2}{3}; \frac{5}{16}; 1.8; .125$$

Now, a new kind of number, a directed number, is studied.

$$+2; +15; -4; -10; \\ -1.5; +2.75; -\frac{1}{2}; +\frac{5}{6}$$

An excellent way to interpret directed numbers is through the use of an east-west road with markers at one-mile intervals.



Trips from C to L or A to B or H to L are all trips of 3 miles east. As a symbol for these trips, use  $+3$ . Trips from E to L or L to C or G to L are all trips of 3 miles west. As a symbol for these trips to the west, use  $-3$ . Now, you can give interpretations for a trip in either direction in terms of a directed number.

At any point in mathematics where a new kind of number is introduced, you learn how to operate with these numbers: that is, how to add, subtract, multiply and divide two of these numbers. Addition can be interpreted very nicely through use of the east-west road with milestone markers.

Consider addition. A trip is made from F to E and then from E to L. What is the mileage? Of course, it is 5 miles east. But let us make an interpretation in terms of directed numbers; it is

$$(+3) + (+2) = +5$$

If a trip is taken from K to L and then from L to A, the total mileage is 6 miles west. In terms of directed numbers, the trips can be interpreted as

$$(-2) + (-4) = -6$$

From a number of examples of this sort, your child can develop a rule for adding two signed numbers with like signs.

Now, let us consider a trip that involves going first in one direction and then in the other direction, say a trip from D to L and then a trip from B to A. This is 5 miles east followed by 3 miles west,

$$(+5) + (-3) = +2$$

since the traveler will be 2 miles east of his starting point. A trip from K to L and then from A to B is a trip 6 miles west followed by a trip 3 miles east;



traveler ends up 3 miles west of his starting point. In our symbols, the interpretation of the problem is

$$(-6) + (+3) = -3$$

Again, after a number of examples of this sort, a rule for operating correctly can be formulated.

Although subtraction can be explained by using an east-west road, a better way is to make use of what your child knows about subtraction of whole numbers. Fundamentally, finding the difference of two numbers, say 16 and 9, is the problem of finding what number added to the second gives the first. That is,  $9 + ? = 16$ ; the answer, of course, is 7. The process is related to the check of subtraction.

$$\begin{array}{rcl} 16 & \leftarrow & \text{minuend} \\ -9 & \leftarrow & \text{subtrahend} \rightarrow 9 \\ \hline 7 & \leftarrow & \text{difference} \rightarrow 7 \end{array} \quad \begin{array}{l} \downarrow \\ \text{add} \\ \hline 16 \leftarrow \text{minuend} \end{array}$$

In words, the difference is the number that is added to the subtrahend in order to yield the minuend.

Let us make use of this idea in subtraction of directed numbers. There are the following six types of subtraction examples to consider:

(A)	(B)	(C)	(D)	(E)	(F)
$+3$	$+7$	$+7$	$-3$	$-3$	$-7$
$+7$	$+3$	$-3$	$+7$	$-7$	$-3$
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

In **Type A**, think, what number added to  $+7$  yields  $+3$ ? Since the minuend is smaller than the subtrahend, the number must be negative. The answer or difference is  $-4$ .

For **Type B**, think, what number added to  $+3$  yields  $+7$ ? The minuend is larger than  $+3$ . Hence, the difference is  $+4$ .

**Type C** is a bit more difficult. Think, what number must be added to  $-3$  to yield  $+7$ ? Again the minuend is larger than the subtrahend; so the answer will be positive. But from  $-3$  to  $+7$  is 10 steps; therefore, the answer must be  $+10$ .

The only difference between **Type C** and **Type D** is that the answer is negative. Think, what number added to  $+7$  yields  $-3$ ? Since the minuend is smaller than

the subtrahend, the answer must be negative. It is  $-10$ .

For **Type E**, think, what number must be added to  $-7$  to yield  $-3$ ? Since  $-3$  is larger than  $-7$ , the answer must be positive. We know that  $(-7) + (+4) = -3$ ; hence, the answer is  $+4$ .

**Types E** and **F** are related. Think, what number must be added to  $-3$  to yield  $-7$ ? Since  $-7$  is smaller than  $-3$ , the answer is negative. We know that  $(-3) + (-4) = -7$ ; so the answer is  $-4$ .

Better than a rule for subtracting two directed numbers is the principle on which subtraction is based. Of course, you can make a rule if you wish, but be sure that first your child understands the basis for the rule.

In the case of multiplication or division of two directed numbers, you may find it wiser simply to state the rule than to try to explain the reason for it. Consider the following two examples:

$$(+5) \times (+11) = +55,$$

and

$$(-5) \times (-11) = +55$$

If the signs of two numbers that are being multiplied are alike, then the product is positive. Similarly,

$$(+55) \div (+5) = +11,$$

and

$$(-55) \div (-5) = +11$$

If two numbers with like signs are divided, the quotient is positive.

Next, we must consider the case of multiplication or division when the two numbers have unlike signs. As you might guess, the answer is negative. Consider the examples:

$$(-5) \times (+11) = -55,$$

and

$$(+5) \times (-11) = -55$$

$$(-55) \div (+5) = -11,$$

and

$$(+55) \div (-5) = -11$$

If two numbers with unlike signs are multiplied or divided, the answer is negative.

After much practice with directed numbers in addition, subtraction, multiplication and division, the next step is to apply

the ideas when letters are used. A few examples follow:

$$(-3a) + (+12a) = +9a$$

$$(-12x) - (-9x) = -3x$$

$$(+2) \times (-3a) = -6a$$

$$(+126) \div (+42) = +3$$

If the basic ideas are gone over carefully with your youngster, he should have no difficulty working with examples like the foregoing.

At some point in your child's work in school, his teacher will point out that the positive numbers behave exactly in the same fashion as the whole numbers in arithmetic. The agreement is made to use +12 or 12, say, interchangeably. If the agreement is not made, a ninth grader might be puzzled at sometimes seeing a +12 as an answer and sometimes just 12. You must be sure that your child understands that directed numbers include the old, familiar numbers of arithmetic.

### Solving Equations

Your ninth grader will, perhaps, have had some instruction in the solution of equations toward the last part of the eighth grade. In algebra, more involved types of equations are solved. After directed numbers have been studied, solutions may be positive or negative and subtraction in an equation will always be possible.

The solution of an equation is a number that, replacing the letter in the equation, makes the left member equal the right member. Some of the first types of equations, together with their solutions, appear below

$$\begin{array}{rcl} \text{(a)} & x + 5 & = 2 \\ & - 5 & = -5 \\ \hline & x & = -3 \end{array}$$

$$\begin{array}{rcl} \text{(b)} & x - 6 & = 8 \\ & + 6 & = +6 \\ \hline & x & = 14 \end{array}$$

$$\text{(c)} \quad \frac{x}{2} = 5$$

$$\begin{array}{rcl} 2 \cdot \frac{x}{2} & = & 2 \cdot 5 \\ x & = & 10 \end{array}$$

$$\text{(d)} \quad 3x = -7$$

$$\begin{array}{rcl} \frac{3x}{3} & = & \frac{-7}{3} \\ x & = & -2\frac{1}{3} \end{array}$$

Notice, in example (c), a center dot "·" is used to indicate multiplication. Beginning with algebra, your child becomes used to using this symbol as an alternative to "×" to indicate that two numbers are to be multiplied.

Solving equations is not difficult if emphasis is put on thinking what to do rather than on following a rule for solving that type of equation. Practice, of course, helps a child to perfect his methods. More involved equations are obtained by combining the types (a) to (d). For example, consider the following equation:

$$\begin{array}{rcl} 3x - 5 & = & 5x + 7 \\ - 7 & = & - 7 \\ \hline 3x - 12 & = & 5x \\ - 3x & = & - 3x \\ \hline - 12 & = & 2x \\ \frac{-12}{2} & = & \frac{2x}{2} \\ -6 & = & x \end{array}$$

Check:  $-6$

left member

$$= 3(-6) - 5 = -18 - 5 = -23$$

right member

$$\begin{aligned} &= 5(-6) + 7 = -30 + 7 = -23 \\ &-23 = -23 \end{aligned}$$

This example illustrates a systematic way to solve the equation: (a) since 7 is added to the right member, to remove it we must subtract 7 from both members; (b) the result is  $3x - 12 = 5x$ . To remove the  $5x$  from the left member, we must subtract  $3x$  from both members; (c) the result is  $-12 = 2x$ . Now, we have a basic type of equation to solve; divide both members by 2, since we have  $2x$  and want to find  $x$ . The final result is  $-6 = x$ . (d) The last equation is so simple that at a glance you can see that replacing  $x$  by  $-6$  leads to the left member being equal to the right member. The check is done to see that  $-6$  is indeed a number that makes the left member equal to the right member in the given equation.

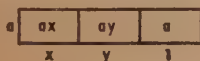
### Factoring

When you studied algebra, you may have spent much time on the topic of speci-

products and factoring. Probably you studied many involved types of factoring and practiced on endless lists of exercises. Nowadays you will find your child studying just three types of multiplication and their corresponding three types of factoring. The names of the types and an illustrative example for each follow

- (a) Common Monomial:  $ax + ay + a = a(x + y + 1)$
- (b) Difference of Two Squares:  $x^2 - y^2 = (x + y)(x - y)$
- (c) Trinomial:  $x^2 - x - 6 = (x - 3)(x + 2)$

Let us consider each of the types in turn. First, multiplication of a single term, a monomial, and several terms, a polynomial. Look at the rectangle below, which has a width of  $a$  and a length of  $x + y + 1$ .



The areas of the small rectangles into which the large rectangle is divided are  $ax$ ,  $ay$  and  $a$ . Using the same formula for the area of a rectangle, length times width, and applying it to the large rectangle, we find its area is  $a(x + y + 1)$ . Yet, the area of the large rectangle equals the sum of the areas of the rectangles into which it has been divided; hence,

$$a(x + y + 1) = ax + ay + a$$

So, to multiply a polynomial by a monomial, multiply each term of the polynomial by the monomial.

$$3x(4x + 3y + 9) = 12x^2 + 9xy + 27x$$

Study the product. Notice that  $3x$  is a part of each term of the right member;  $3x$  is common to every term. That means it is a factor of every term. You can recognize an example that is a common monomial factoring type by looking to see if the given expression has something common to every term. For example,

$$15xyz + 5xy^2 - 40xyz^2$$

has the monomial  $5xy$  common to every term. One factor is  $5xy$ ; the other factor is obtained by thinking, by what must I multiply  $5xy$  to yield  $15xyz$ ? to yield  $5xy^2$ ? to yield  $-40xyz^2$ ? Then the factored expression is

$$5xy(3z + y - 8z^2)$$

The difference of two squares as a factoring type is easy to recognize because there

are always (a) just two terms, (b) each term is a perfect square, and (c) there is a minus sign between the terms. The factors are the sum of the square roots of the terms and the difference of their square roots. For example,

$$9x^2 - 49y^2 = (3x + 7y)(3x - 7y)$$

That the product is indeed the difference of two squares can be verified by multiplication. Let us check, as in the example below, where we multiply first by  $3x$  and second by  $-7y$ . Like terms fall under one another nicely if you multiply from left to right. You can see that the product is the given expression. We factored correctly.

$$\begin{array}{r} 3x + 7y \\ 3x - 7y \\ \hline 9x^2 + 21xy \\ - 21xy - 49y^2 \\ \hline 9x^2 - 49y^2 \end{array}$$

In case your boy or girl has trouble factoring a trinomial, check to see if he understands that it is the product of two binomials. For example, the product of  $(x + 2)$  and  $(x + 1)$ , as shown in the adjacent multiplication, is  $x^2 + 3x + 2$ . Just as soon as he realizes this, he knows that he must look for two binomials as factors of a trinomial. About all you can tell your child to help him to recognize a trinomial type of factoring is that there are always three terms, and there is no expression common to the terms. As an example, let us factor the trinomial

$$\begin{array}{r} x + 2 \\ x + 1 \\ \hline x^2 + 2x \\ + x + 2 \\ \hline x^2 + 3x + 2 \end{array}$$

$$\begin{array}{c} \text{Outside} \\ \downarrow \quad \downarrow \\ 4x^2 + 4xy - 3y^2 = (2x + 3y)(2x - y) \end{array}$$

First, write the factors of the *end* terms in their proper position in the parentheses in the right member; the factors of  $4x^2$  are  $2x$  and  $2x$  or  $4x$  and  $x$ ; the factors of  $3y^2$  are  $3y$  and  $y$ . Now, you must place the "+" and the "-" so as to obtain the correct middle term,  $4xy$ . The middle term is always the sum of two products, the product of the "inside" terms and the product of the "outside" terms.



Notice that there is a choice of factors for the first term in the foregoing example. Such is often the case. The task, then, is to choose a pair of factors, making a mental check to see if the correct middle term is obtained, and accept or reject the choice of factors on the basis of your check.

### Solving Quadratic Equations

A natural sequel to factoring is solving quadratic equations. In general, the form of a quadratic equation is

$$ax^2 + bx + c = 0$$

where  $a$ ,  $b$  and  $c$  are numbers and  $x$  is to be found. There are several ways to solve a quadratic equation, but one of the simplest is factoring. Consider

$$x^2 - 7x + 6 = 0$$

Clearly, the left member is a trinomial that can be factored and written as the product of two binomials:

$$(x - 6)(x - 1) = 0$$

Since these two factors, multiplied together, equal zero, one or the other may be equal to zero.

$$\begin{array}{ll} \text{When} & x - 6 = 0 \\ & x = 6 \end{array}$$

$$\begin{array}{ll} \text{When} & x - 1 = 0 \\ & x = 1 \end{array}$$

$$\begin{array}{ll} \text{Therefore} & x = 6 \\ & \text{or} \\ & x = 1 \end{array}$$

It is possible to derive a formula for obtaining the roots of a quadratic equation. You may find your child using such a formula. It is given below.

$$ax^2 + bx + c = 0,$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Now, to use the formula, all you need know are the values of  $a$ ,  $b$  and  $c$ . For example, consider the quadratic equation

$$2x^2 - 3x = 1$$

First, we must put the equation in a form so that one member is zero.

$$2x^2 - 3x - 1 = 0$$

Here,  $a = 2$ ,  $b = -3$ ,  $c = -1$ . Substitute in the formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-(-3) \pm \sqrt{(-3)^2 - 4(2)(-1)}}{2(2)}$$

$$x = \frac{3 \pm \sqrt{9 + 8}}{4}$$

$$x = \frac{3 \pm \sqrt{17}}{4}$$

The two roots are:

$$x = \frac{3 + \sqrt{17}}{4} \quad x = \frac{3 - \sqrt{17}}{4}$$

In this review of algebra we have selected those topics which most algebra students find difficult. If you, as a parent, can help your child over these few rough spots in his study of algebra, you will find that he and his mathematics teacher will do the rest of the job. Often, all that is needed is a boost. Remember, the ninth grader wants to establish his independence—and you want him to be independent of you as parents—so do not try to help him every day. Just check occasionally to see that all is going as well as can be expected.

## YOUR FAMILY NAME—WHAT DOES IT MEAN

by ELSDON C. SMITH, Former President, American Name Society

This is an expanded list of names over the list published in the "Information Please Almanac," Edition.

**D**URING the 11th to the 17th centuries, our modern family names came into use. At first they were merely temporary descriptive words employed to distinguish one John or William from another. As countries became more thickly populated and as people traveled more, single names became inadequate. The ordinary villager needed an addi-

tional name perhaps only three times during his life: when he paid the fine to the lord of the manor upon inheriting receiving his land, when he received permission to marry, and upon his death, when the lord received his best chattel. These were the occasions that had to be recorded properly by the clerk.

Practically all hereditary family names in the Western world originated in one of the following four ways:

1. From a place name; that is, one who came from, or lived or worked near, a place or topographical feature, as London, Frankfurt, Kent, Oakes, Atwater. Included in this group are those named from the pictorial signboards found on inns, shops and houses in medieval times, such as Wolf or Bush. When few could read, these visual symbols were necessary.

2. From the man's occupation or official position, as Arrowsmith, Chaucer (maker of chauses or breeches), Sawyer, Sumner (summoner).

3. From the father's name, as Danielson, Fitzsimmons, McDonald, Romanovitch, Alvares, Upjohn, Nicolopoulos. Among the Irish, O' means "grandson of."

4. From some prominent descriptive feature or nickname, as Moody (which origin-

ally meant brave), Stout, Cameron (crooked nose).

Even today, if one did not know a person's name, one would be likely to describe or refer to him in one of these four ways.

Few surnames were consciously adopted by the bearer; usually they were applied by others. For many centuries, surnames could be changed with little or no ceremony. In America, they may still be changed without court permission if no fraudulent intent is involved.

Many surnames have more than one origin, but only the most important are given here. Minor variations in spelling are the result of chance or are due to provincial or dialectal usage. The following list includes about several hundred surnames that are most common in the U. S., as indicated by the Social Security rolls. In addition, we have listed about 100 names of famous persons, chiefly Americans.

**AARON, AARONSON, AARONS:** Descendant of Aaron (lofty mountain).

**ABBOTT, ABBOT:** Member of an abbot's entourage.

**ABRAMS, ABRAM, ABRAMSON:** Descendant of Abram (high father).

**ACHESON:** Son of Ache (sword).

**ACKERMAN:** Acre-man or farmer.

**ADAMS, ADDAMS:** Son of Adam (red earth).

**ADLER:** Dweller at the sign of the eagle.

**AGASSIZ:** Magpie, probably from residence at a signboard.

**AHERN, AHEARN, AHERNE:** Grandson of Eachthighearna (horse owner).

**ALDEN, ALDINE, ALDIN:** Descendant of Aldwin (old friend).

**ALDRIDGE:** One from Aldridge (village among alders), in Staffordshire.

**ALEXANDER:** Descendant of Alexander (helper of mankind).

**ALLEN, ALLAN, ALAN:** Descendant of Alan (a very old name, of obscure origin).

**ALLISON, ALISON:** Son of Ellis (God is salvation).

**ALSTON:** One from Alston (Al's village), the name of several places in England.

**ANDERSON, ANDREWS, ANDREWSON:** Son of Andrew (man).

**ANTHONY:** Descendant of Anthony (inestimable).

**ARCARO:** One who made bows.

**ARCHER:** Fighting man armed with bow and arrows.

**ARMOUR, ARMOR:** One who made defensive armor for the body.

**ARMSTRONG:** Strong-armed one.

**ARNOLD:** Descendant of Arnold (eagle rule).

**ASHTON:** One from Ashton (village where ash trees grew), the name of various places in England.

**ATKINS, ATKINSON:** Son of Little Ad, a pet form of Adam (red earth).

**AUDUBON:** French for "of the good."

**AUSTIN, AUSTEN:** Descendant of Augustine (majestic).

**AVERY:** Descendant of Aelfric (elf ruler).

**AYERS, AYER:** Descendant of the heir; i.e., the person in whom the fee of the real property of an intestate is vested.

**BABCOCK:** Son of Babb, a pet form of Barbara (stranger).

**BAER, BARR, BEHR, BEAR, BAHR, BAEHR:** Dweller at the sign of the bear.

**BAILEY, BAYLEY, BAYLE:** Bailie or bailiff, a steward.

**BAKER, BAXTER:** Breadmaker.

**BALDWIN:** Descendant of Baldwin (bold friend).

**BALL:** Descendant of Baldwin (bold friend).

**BALLARD:** Bald-headed one.

**BANKHEAD:** Dweller at the end of a bank, a slope or declivity in the land.

**BANKS, BANK, BANKER:** Dweller near a mound or embankment.

**BARBER, BARBOUR:** One who dressed hair and practiced surgery.

**BARKER:** One who prepared leather with bark; a tanner.

**BARKLEY:** One from Berkley (birch wood); dweller at a birch meadow.

**BARLOW:** One from Barlow (barley hill) in England.

**BARNES:** Dweller near a barn or grain storage building.

**BARON, BARRON:** Landowner who held of the king.

**BARR:** One from Barr (height) in Ayrshire or Renfrewshire.

**BARRETT, BARRETTE:** Descendant of Barret (bear, rule).

**BARRY, BARRIE:** One from Barry (height on the isle) in Angus.

**BARRYMORE:** Dweller at a woodland marsh.

**BARTON:** One from Barton (grain farm), the name of various places in England.

**BARUCH:** Descendant of Baruch (blessed).

**BASS:** Short or fat one.

**BATES, BATE, BATTS, BATT, BAT:** Son of Bate, a pet form of Bartholomew (son of Talmal, furrow).

**BAUER, BAUR:** One who tilled the land; a farmer.

- BEAN, BEANE:** Descendant of Ben, a pet form of Benjamin (son of my right hand).
- BEARD:** One from Beard (bank) in Derbyshire.
- BECK:** Dweller at or near a brook or stream.
- BECKER:** Dweller at a brook.
- BECKMAN, BECKMANN:** Dweller at a brook.
- BEEBE, BEEBY:** Dweller at a bee farm.
- BELL:** Dweller at the sign of the bell.
- BENDER:** One who made casks; a cooper.
- BENDIX, BENEDIX:** Descendant of Benedict (blessed).
- BENJAMIN:** Descendant of Benjamin (son of my right hand).
- BENNETT:** Descendant of Benedict (blessed).
- BENSON:** One from Benson (Benesa's homestead), in Oxfordshire.
- BERG:** Dweller near a hill or mountain.
- BERNSTEIN:** One from Bernstein (amber), now in Poland.
- BERRA:** Dweller in a hut or hovel.
- BERRY:** Dweller at or near a hill.
- BEST:** Dweller at the sign of the beast.
- BEYER, BEIER:** One from Bavaria, in Germany.
- BILLINGS:** One from Billing (Billa's people) or from Billinge (sword) in England.
- BINGHAM:** One from Bingham (Bynna's estate) in Nottinghamshire.
- BIRCH, BIRCHER, BURCH, BURCHER:** Dweller at or near the birch tree.
- BISHOP:** Member of a bishop's entourage.
- BLACK, BLAKE:** Swarthy-complexioned one.
- BLACKBURN:** One from Blackburn (dark-colored stream) in Lancashire.
- BLACKWELL:** Dweller at or near the black stream.
- BLANCHARD:** Descendant of Blanchard (white, hard).
- BLOCH, BLOCK:** Dweller at the sign of the block or cube.
- BLUMBERG:** One from Blumberg (flower mountain) in Germany.
- BOOTH:** Dweller at a hut or stall.
- BOTTOM:** Dweller in a valley.
- BOWERS, BOWER:** One from the manor of Bower (house) in Peebleshire.
- BOWMAN:** Fighting man who was armed with a bow.
- BOYD:** Yellow-haired one.
- BRADLEY:** Dweller near a broad meadow.
- BRADY:** Son of Bradach (spirited).
- BRADFORD:** One from Bradford (broad river crossing), the name of various places in England.
- BRAUN.** See **BROWN**
- BRENNAN:** Grandson of little Bran (raven).
- BREWER, BREWSTER:** One who brewed beer or ale.
- BRIGGS, BRIGG:** Dweller near a bridge.
- BROCKMAN:** Dweller at a brook.
- BROOKS, BROOKES:** Dweller near a spring or brook.
- BROWN, BROWNE:** Dark-complexioned one.
- BRYANT, BRYAN:** Descendant of Bryan (hill).
- BUCHANAN:** One from Both-Chanain (the Cannon's seat) in Sterlingshire.
- BUCKLEY:** One from Bulkeley (bullock pasture) in Cheshire.
- BUNCHE:** Descendant of Bunn (good).
- BURBANK:** Dweller at a castle on a moor or embankment.
- BURGESS:** Citizen or freeman of a borough who owed special duties to the king; had certain privileges.
- BURKE:** From a burgh or stronghold.
- BURNETT:** One from Burnett (place cleared by burning) in Somerset.
- BURNHAM:** One from Burnham (estate or stream), the name of various places in England.
- BURNS, BURNES:** Dweller near a burn or brook.
- BURTON:** One from Burton (village by fort, or fortified manor), the name of many villages in England.
- BUSH, BUSCH:** Dweller at the sign of a bush (usually a wine merchant).
- BUTLER:** One who made or had charge of bottles.
- BYRD, BIRD:** Dweller at the sign of the bird.
- BYRNE, BYRNES:** Grandson of Bran (raven) or of Bjorn (bear).
- CAIN, CAINE:** Descendant of Cathan (warrior).
- CALLAHAN, CALLAGHAN:** Grandson of lithe Ceallach (contention).
- CAMERON:** Crooked-nosed one.
- CAMPANELLA, CAMPANINO:** Dweller at the sign of the bell.
- CAMPBELL:** One with a crooked mouth.
- CAPONE:** Big-headed one.
- CAREY:** Grandson of a dark-complexioned man.
- CARLSON, KARLSON:** Son of Carl (man).
- CARPENTER, CARPENTIER:** Worker in wood.
- CARR, KERR:** Dweller at or near a marsh.
- CARROLL:** Descendant of Carroll (warrior).
- CARSON:** Dweller in or near a marsh.
- CARTER:** Cart driver.
- CARVER:** Wood carver or cutter.
- CASE:** One from Case in France.
- CASEY:** Grandson of Cathasach (vigilant).
- CHAMBERLAIN, CHAMBERLIN, CHAMBERS:** An officer in charge of the private household of a king or important nobleman.
- CHANDLER:** One who made or sold candles and small wax images for ecclesiastical offerings.
- CHAPLIN:** Clergyman who had a chapel; chaplain.
- CHAPMAN:** Merchant or tradesman; a peddler.
- CHASE, CHACE:** Dweller at the hunting ground or woods.
- CHESTER:** One from Chester (walled town the name of several places in England).
- CHRISTENSEN, CHRISTENSON:** Son of Christian (follower of Christ).
- CHRISTIE, CHRISTY:** Descendant of Christ or Christy, pet forms of Christian (follower of Christ) and Christopher (Christ-bearer).
- CHURCH:** Dweller near a building used for Christian worship.
- CHURCHILL:** Dweller at or near a church hill.
- CLANCY:** Son of Flannchadh (ruddy warrior).
- CLARK, CLARKE:** Clergyman, scholar, scribe or recorder (British pronunciation of clerk).



- CLAY:** Dweller at a clayey place.
- CLAYTON:** One from Clayton (village on clayey soil), the name of several towns in England.
- CLEMENS, CLEMENT:** Descendant of Clement (gentle).
- CLEVELAND:** One from Cleveland (hilly district) in Yorkshire.
- CLOSE:** Dweller at an enclosure or fenced field.
- CLOUD:** Dweller near a rock or mass of stone.
- COBB:** Dweller near a roundish mass or lump.
- COHEN, COHN, COHAN, KAHN, KOHN:** Priest.
- COLE:** Descendant of Cole, a pet form of Nicholas (people's victory).
- COLEMAN:** Servant of Cole. (*See* Cole.)
- COLLINS:** Son of little Cole. (*See* Cole.)
- COMBS, COMBE:** Dweller at a deep hollow or valley.
- COMPTON:** Dweller at a hollow estate.
- CONANT:** Descendant of Conan (little hound).
- CONNELLY, CONNOLLY:** Descendant of Conghalach (valorous).
- CONNORS, CONNOR:** Grandson of Concobair (meddlesome).
- CONRAD:** Descendant of Conrad (bold, counsel).
- COOK, COKE, COOKE:** One who prepared food.
- COOPER, COWPER:** Cask maker or seller.
- COX, COCKS:** Dweller at the sign of the cock.
- CRAIG:** Dweller at or near a rock or crag.
- CROMWELL:** One who came from Cromwell (winding stream) in Nottinghamshire.
- CRANE, CRAN:** Dweller at the sign of the crane.
- CRAWFORD:** One from Crawford (crow's pass) in Lanarkshire.
- CROSBY:** One from Crosby (farm by the cross), the name of several villages in England.
- CROWDER, CROWTHER:** One who played a crowd (a musical instrument); a fiddler.
- CRUM, CRUME:** Crooked or deformed person.
- CUMMINGS, CUMMINS:** One from Comines in Flanders.
- CUNNINGHAM:** One from Cunningham (rabbit farm) in Ayrshire.
- CURTIS, CURTISS:** One with court-like or elegant manners; well-bred.
- DALTON:** One from Dalton (village in the valley), the name of several places in England.
- DALY, DALEY:** One who frequented assemblies.
- DANIELS, DANIELSON:** Son of Daniel (God has judged).
- DAVIDSON, DAVIDS:** Son of David (beloved).
- DAVIS, DAVIES:** Son of Davie or David (beloved).
- DAWSON:** Son of Daw, a pet form of David (beloved).
- DAY, DEY:** Dairy worker.
- DEAN, DEANE:** Dweller at a valley or woodland pasture.
- DEMPSEY:** Descendant of Dymasa (proud).
- DENNIS, DENIS:** Descendant of Denis (belonging to Dionysus, Grecian god of wine).
- DEUTSCH, DEUTSCHER:** One from Germany; a German.
- DEWEY:** Descendant of little David (beloved).
- DIAMOND:** Descendant of Daymond (day protection).
- DICKENS, DICKINS:** Son of little Dick, a pet form of Richard (rule, hard).
- DIETRICH, DIETRICK:** Descendant of Theodoricus (people, ruler).
- DIETZ, DIETSCH:** Descendant of Teuzo, a pet form of names beginning with Diet (people), as Theudoald.
- DILLON:** Descendant of little Dill or Dilla (spoil).
- DIMAGGIO:** One named after the month of May.
- DIXON, DICKSON:** Son of Dick, a pet form of Richard (rule, hard).
- DOBB, DOBBS:** Son of Dobb, a pet form of Robert (bright fame).
- DODGE:** Descendant of Dodge, a pet form of Roger (fame, spear).
- DOHERTY, DOUGHERTY:** Grandson of Dochartach (hurtful or unfortunate).
- DONALDSON, DONALD:** Son of Donald (dark or brown-haired stranger).
- DONNELLY, DONLEY:** Grandson of Donnghal (brown valor).
- DONOHUE, DONOGHUE:** Descendant of Donogh (brown battler).
- DORSEY:** Grandson of Dorchaidhe (dark man).
- DOUGLAS:** Dweller at the black water or stream.
- DRAKE:** Dweller at the sign of the dragon.
- DRISCOLL:** Descendant of the interpreter.
- DUDLEY:** One from Dudley (Dudda's meadow) in Worcestershire.
- DUFFY:** Grandson of Dubhthach (black).
- DUKE:** Descendant of Duke, a pet form of Marmaduke (sea leader).
- DULLES:** One from the village of Dulas (dark river) or a dweller by the Dulas river in England.
- DUNCAN:** Brown warrior.
- DUNN:** Dark-brown-complexioned one.
- DWYER:** Descendant of the dark, tawny man.
- EDEN:** Descendant of little Ede or Ead (prosperity).
- EDISON:** Son of Edie or Eadie, pet forms of Edmund (rich protector), Edward (rich guardian), Edwin (rich friend), etc.
- EDWARDS:** Son of Edward (rich guardian).
- EGAN, EAGAN:** Son of little Aodh (fire).
- EINSTEIN:** One who lined with stone; a mason.
- EISENHOWER:** Iron cutter or iron miner; maker of eisenhauers—sabers or swords capable of shearing an iron nail.
- ELLIOTT:** Descendant of little Elias (Jehovah is my God).
- ELLIS:** Descendant of Ellis (God is salvation).
- ELSDON:** One from Elsdon (Ellis' valley) in Northumberland.
- EMERSON:** Son of Emery (industrious).
- ENGEL, ENGLE:** One from England.

**ERICKSON, ERICSSON:** Son of Eric (ever king).

**ERNST:** Descendant of Ernst (earnestness).

**EVANS:** Son of Evan (young warrior).

**EVERETT, EVERARD:** Descendant of Everard (boar, strong).

**FAIRLESS:** Dweller near a bull meadow.

**FARLEY, FARLEIGH:** One from Farley or Farleigh (fern-covered clearing), the names of several places in England.

**FARRAGUT:** Good traveler.

**FARRELL, FARRALL:** Grandson of Fearghal (super valor).

**FAY, FAYE:** One from Fay or Faye (beech tree) in France.

**FAULKNER:** Falconer; that is, one who keeps and trains falcons or hawks to hunt game.

**FEDER, FEDDER:** Dweller at the sign of the feather.

**FELDMAN:** Worker in a field or open country.

**FERGUSON:** Son of Fergus (manly strength).

**FIELDS, FIELD, FELD:** Dweller in an open country or land free of trees.

**FINK, FINCK:** Dweller at the sign of the finch.

**FINN, FINNE, FYNN:** Descendant of Fionn (fair).

**FISHER, FISCHER:** Fisherman or seller of fish.

**FITZGERALD:** Son of Gerald (firm spear).

**FITZPATRICK:** Son of Patrick (noble or patrician).

**FLEMING:** One from Flanders.

**FLETCHER:** One who made or sold arrows, and sometimes bows.

**FLOWERS:** One who made arrows.

**FOLEY:** Grandson of Foghlaidh (plunderer).

**FORD:** Dweller or worker at a shallow stream crossing.

**FOSTER:** Forest warden or game keeper.

**FOX:** Dweller at the sign of the fox.

**FRANCIS:** Descendant of Francis (the free).

**FRANKEL:** Descendant of little Frank (free).

**FRANKLIN:** Descendant of a free man.

**FRAZIER, FRASER:** One from Friesland; the Frisian.

**FREDERICK:** Descendant of Frederick (peace, ruler).

**FREEMAN:** Free man, one whose status was just above that of a serf.

**FRENCH:** One from France; a Frenchman.

**FREY:** One who worshipped Frey, the Norse god of love, marriage and fruitfulness.

**FRICK:** Descendant of a bold man.

**FRIEDMAN, FREEDMAN:** Man of peace.

**FROST:** Descendant of Frost (one born at the time of frost).

**FULBRIGHT:** Descendant of Fulbeorht (very bright).

**FULLER:** One who cleaned and thickened cloth.

**FULTON:** One from Fulton (fowl enclosure) in Roxburghshire.

**FUNK, FUNCK:** Sparkling or animated person.

**GALLAGHER, GALLAHER:** Foreign helper or assistant.

**GALLUP, GALUP, GALUT:** Flat-bottomed boat used to load and unload ships, the surname being applied to the members of the crew.

**GANNETT:** One from Gannat, a town in central France.

**GARCIA:** Descendant of Garcia (firm spear).

**GARDNER, GARDINER:** One who took care of a garden, cultivating flowers and vegetables.

**GARNER:** Descendant of Garner or Warner (protection, warrior).

**GARRISON:** Son of Garry, a pet form of Garrath (spear, firm).

**GARRETT, GARRATT:** Descendant of little Gerard (firm spear).

**GARROWAY:** Spear warrior.

**GATES:** Dweller in or near a gate, or gap, in a chain of hills.

**GEORGE:** Descendant of George (farmer).

**GERBER:** One who prepared leather; a tanner or currier.

**GIBSON, GIBBON, GIBBONS:** Son of Gilbert (pledge, but champion).

**GILBERT:** Descendant of Gilbert (bright).

**GILLESPIE:** Servant of the bishop.

**GILMORE, GILMOUR:** Son of the servant or devotee of Mary.

**GLASS, GLASSER:** One who made or sold glassware.

**GLEASON:** Little man of pale or gray complexion.

**GOBEL, GOEBEL, GOBLE:** Descendant of Godbeald (God, brave).

**GOLDBERG, GOLDBERGER:** One from Goldberg (gold mountain), the name of five places in Germany.

**GOLDMAN:** Servant of Gold or Golda (gold).

**GOLDSMITH:** One who made or sold gold articles; a jeweler; later, a banker.

**GOLDSTEIN:** Gold stone.

**GOLENPAUL:** Dweller in or near an open field.

**GOMEZ:** Son of Gomo, a pet form of Gomesano (man, path).

**GONZALEZ:** Son of Gundisalv (battle, elf).

**GOODWIN:** Descendant of Goodwin (God's friend).

**GORDON:** Dweller at or near a triangular hill pasture.

**GORE:** Dweller near or at a triangular piece of land.

**GOULD, GOLD:** Son of Gold or Golda, Old English personal names derived from the metal.

**GRAHAM:** Dweller at a gray enclosure.

**GRANT:** Large one.

**GRAVES:** Descendant of the grave, a minor official appointed by the lord of the manor to supervise his tenants' work.

**GRAY, GREY:** Gray-haired one.

**GREEN, GREENE:** Dweller at or near a village green or grassy ground.

**GRIFFIN:** Dweller at the sign of the griffin, a fabulous monster half lion and half eagle.

**GRIFFITH, GRIFFITHS:** Descendant of Griffith (fierce lord).

**GROSS:** Large one.

**GUSTAFSON, GUSTAVSON:** Son of Gustav (Goth's staff).

**HACKETT:** Descendant of little Hack or Hache (hook).

**HAINES, HAYNES:** One from Haynes (enclosures) in Bedfordshire.

**HALE, HALES:** Dweller at a corner, nook, small hollow or secret place.

**HALEY:** Dweller at the way or passage leading to a hall.

**HALL, HULL:** Dweller in or near a manor house.

**HAMILTON:** One from Hambleton (bare or treeless hill), the name of several villages in England.

**HAMMARSKJÖLD:** Swedish name meaning "hammer shield."

**HAMMOND:** Descendant of Hamon (home), or of Heahmund (chief protector).

**HANCOCK, HANCOX:** Descendant of little Hane, a pet form of John (gracious gift of Jehovah).

**HANLEY, HANDLEY:** One from Hanley or Handley (high meadow), the name of several places in England.

**HANSEN, HANSON:** Son of Hans, a diminutive of the Teutonic Johannes (gracious gift of Jehovah).

**HARDWICKE:** One from Hardwick (sheep pasture), the name of several villages in England.

**HARDY, HARDIE:** Descendant of Hardi, a short form of Hardouin (bold, friend).

**HARPER:** From the office of harper, the one who played the harp at fair and festival, or for an important lord.

**HARRIGAN:** Grandson of little Anradh champion).

**HARRINGTON:** One from Harrington (the heath-dwellers' enclosure) in Northamptonshire.

**HARRIS, HARRISON:** Son of Harry, a pet form of Henry (ruler of the home).

**HART:** Dweller at the sign of the hart.

**HARTMAN:** Descendant of Hartmann (strong, man).

**HAWKINS, HAWKINGS:** Son of Hawkin, little Harry, a pet form of Henry (ruler of the home).

**HAWTHORNE:** One from Hawthorn (hawthorn tree), a village in Durham.

**HAYES, HAYS, HAY:** Dweller at a hedge or hedged enclosure.

**HEARST:** Dweller on or near a copse or wooded eminence.

**HECHT:** Dweller at the sign of the pike (fish).

**HENDERSON, HENRYSON:** Son of Henry (ruler of the home).

**HENNESSY:** Grandson of Aonghus (one-choice).

**HENRY:** Descendant of Henry (ruler of the home).

**HERBERT:** Descendant of Herbert (army, bright).

**HERMAN:** Descendant of Herman (army, man).

**HERNANDEZ:** Son of Hernando (journey, venture).

**HESS:** One from Hesse (hooded people) in Germany.

**HICKEY, HICKOK:** Descendant of little Hick, a pet form of Richard (rule, hard).

**HICKS, HICKSON, HIXON:** Son of Hick, a variant of Dick, pet forms of Richard (rule, hard).

**HILL:** Dweller at or near a hill.

**HILTON:** One from Hilton (hill village), the name of several villages in England.

**HINES, HINDS, HINE:** Domestic servant.

**HIRSCH, HIRSH:** Dweller at the sign of the hart.

**HODGES:** Descendant of Hodge, a pet form of Roger (fame, spear).

**HOFFMAN, HOFMANN:** Farm or manor servant.

**HOGAN:** Descendant of the little youthful one.

**HOLDEN, HOLDENER:** One from Holden (deep valley) in Yorkshire.

**HOLLAND, HOLLANDER:** One from the Netherlands.

**HOLMES, HOLM:** Dweller at or near a holly tree.

**HOLT:** Dweller by a wood or copse.

**HOOPER:** One who made hoops; a cooper.

**HOOVER, HUBER:** Feudal tenant of a hide of land (30 acres).

**HOPE:** Dweller on a raised or enclosed land in the midst of a marsh or waste land.

**HOPKINS, HOPKINSON:** Son of little Hob, a variant of Rob, pet forms of Robert (bright fame).

**HOROWITZ:** Dweller on or near a mountain.

**HORTON:** One from Horton (village on muddy land), the name of various places in England.

**HOWARD:** Descendant of a hayward, the manorial official in charge of the hedges and guardian of the cultivated land.

**HOWE:** Dweller on or near a projecting ridge of land or promontory.

**HOWELL:** Descendant of Howell (eminent).

**HUBBARD:** Descendant of Hubert (spirit bright).

**HUDSON, HUTSON:** Son of Hudde, a pet form of Richard (rule, hard).

**HUGHES:** Son of Hugh (spirit).

**HUMPHREY:** Descendant of Humphrey (supporter of peace).

**HUNT, HUNTE, HUNTER:** Huntsman.

**HURST:** Dweller by or in a wood or copse, or on a knoll or hillock.

**HURWITZ, HURWICH, HURVITZ:** One from Horovice, Horice or Horitz (mountainous place) in Bohemia.

**HUTCHINSON, HUTCHINS:** Son of little Hutch, a pet form of Hugh (spirit).

**HYDE:** Dweller on a homestead consisting of one hide; i.e., as much land as could be tilled with one plow.

**INGRAM, INGRAHAM:** One of Ingram (grassland enclosure) in Northumberland.

**IRWIN, ERVIN, ERWIN:** Descendant of Erwine (sea friend).

**JACKSON:** Son of Jack, a pet form of John (gracious gift of Jehovah).

**JACOBS, JACOBSON:** Son of Jacob (the supplanter).

**JAMES:** Descendant of James, Old French form of Jacob (the supplanter).

**JEFFERSON:** Son of Jeffrey (God's peace).

**JEFFRIES:** Descendant of Geoffrey of Jeffrey.

**JENKINS:** Son of little Jen, a pet form of John (gracious gift of Jehovah).

**JENNINGS:** Descendant of Jen, a pet variant of John (gracious gift of Jehovah).



**JENSEN:** Son of Jen. (*See* Jenkins.)

**JOHNSON, JOHNS:** Son of John (gracious gift of Jehovah).

**JOHNSTON:** One from Johnston (John's manor) in Dumfriesshire; also confused with Johnson.

**JONES:** Son of Jone, the Welsh pronunciation of John.

**JORDAN:** Descendant of Jordan (flowing down), one named after the river Jordan.

**JOSEPH:** Descendant of Joseph (he shall add).

**JOYCE:** Descendant of Joyce (joyful), a masculine name in medieval times.

**KAISER:** Descendant of Caesar; i.e., emperor.  
**KAPLAN:** Descendant of a chaplain or high priest.

**KAUFMAN:** Merchant or tradesman.

**KAYE, KEY, KEYS:** Dweller near a wharf or boat-landing place.

**KEELER:** One who worked on a keel or long boat; a seaman or bargeman.

**KEFAUVER:** Maker of vats.

**KEITH:** Dweller on the lands of Keith (wood) in East Lothian.

**KELLOGG:** One who slaughtered hogs.

**KELLY, KELLEY:** Descendant of Kelly (contention).

**KENNEDY:** Descendant of Kennedy (head armor).

**KENNEY:** Grandson of Clonadh (fire sprung).

**KENT:** One from the county of Kent (open country) in the southeast corner of England.

**KENYON:** One from Kenyon (Enion's mound) in Lancashire.

**KERR:** Dweller at or near a marsh, especially one grown up with low bushes.

**KETTERING:** From Kettering (estate of Cyt-ringas) in Northamptonshire.

**KERNAN, KIERNAN:** Son of the lord or owner of the village.

**KESSLER:** One who made kettles.

**KIERAN:** Grandson of Kieran (little black one), the name of 15 Irish saints.

**KILGALLAN:** Descendant of the servant of St. Caillin.

**KING:** One who played that part in a pageant; one connected in some way with the king's household.

**KIRBY, KIRKBY:** One from Kirby or Kirkby (village with a church), the name of various places in England.

**KIRK, KIRKE:** Dweller near a church.

**KIRKPATRICK:** One from Kirkpatrick (church of St. Patrick), the name of several places in Scotland.

**KLEIN, KLINE:** Small one.

**KNAPP:** Dweller at the top of a hill.

**KNIGHT:** Military servant of the king.

**KNOWLAND:** Dweller at a knoll or hill-top.

**KNOX, KNOWS:** Dweller on the lands of Knock (hill) in Scotland.

**KOCH:** One who prepared food; a cook.

**KRAMER:** Shopkeeper or tradesman.

**KRAUSE, KRAUSS:** Descendant of a curly-headed man.

**KREISLER:** One who operated a lathe; a turner.

**KRUEGER, KRUGER:** Publican or keeper of an inn.

**LAMB:** Dweller at the sign of the lamb.

**LAND, LANDIS:** Dweller in or near a cultivated field.

**LANE, LAYNE:** Dweller at a narrow rural road.

**LANG, LANGE:** Tall one.

**LANIER:** One who dressed, wove or sold wool.

**LARDNER, LARDER:** Keeper of a larder, the place where provisions were stored.

**LARSON, LAWSON:** Son of Lars or Lawrence (laurel, symbol of victory).

**LAWRENCE:** Descendant of Lawrence (laurel, symbol of victory).

**LEE, LEA, LEGG, LEIGH, LEY:** Dweller at a meadow or open place in a wood.

**LEHMAN:** Vassal or feudal tenant.

**LEONARD:** Descendant of Leonard (lion, bold).

**LESTER:** One from Leicester (dwellers on Legra river), a town and county in England.

**LEVIN, LEVINE:** Descendant of Leofwin (dear friend).

**LEVY:** Descendant of Levi (my joining).

**LEWIS:** Descendant of Lewis (hear, fight).

**LINCOLN:** One from Lincoln (lake colony) in Lincolnshire.

**LIND, LINDE:** Dweller by a lime tree.

**LINDBERGH:** Linden tree on a hill or mound.

**LINDQUIST, LINQUIST:** Linden-tree twig.

**LINDSAY, LINDSEY:** One from Limesay (lime tree) or Lindesey (linden isle) in Normandy.

**LIPPMANN, LIPMAN:** Servant of Lipp, a pet name of Phillip (lover of horses).

**LIVINGSTON:** One from the lands, now parish, of Livingston (abode of Leofwin, dear friend) in west Lothian.

**LLOYD:** From *llywd* meaning both brown and gray, referring to the complexion or hair.

**LOCKE:** Dweller by an enclosure of some kind.

**LODGE:** Dweller in a cottage or hut.

**LOGAN:** One from Logan (little hollow) in Ayrshire.

**LONG, LANG, LANGE:** Tall one.

**LONGFELLOW:** Tall partner or companion.

**LOVE:** Descendant of Love, an early English name.

**LOWE:** Dweller at the sign of the lion.

**LOWELL:** Dweller at the sign of the little wolf.

**LUCAS, LUKAS:** Descendant of Lucas or Luke (light).

**LUCE:** Descendant of Luke (light).

**LUNT:** One from Lunt (grove) in Lancashire.

**LYNCH:** Dweller at a ridge or bank which separated strips of arable land.

**LYNN, LYNNE:** Dweller at or near a pool or lake.

**LYONS:** Descendant of Leon (lion).

**MacARTHUR:** Son of Arthur (valorous).

**MacCLELLAN:** Son of a servant of St. Faolan.

**MacGOWAN, MAGOWAN:** Son of a smith, or worker in metals.

**MacINTYRE, MacINTIRE:** Son of a carpenter, or worker in wood.

**MacMILLAN:** Son of a bald or tonsured one.

**MACK:** Descendant of Mack (son), an abbreviation of one or another of the numerous Gaelic Mac- names.

**MADDEN:** Descendant of little Matthew (gift of Jehovah).

**MADISON:** Son of Matthew (gift of Jehovah).

**MANN:** Vassal or servant.

**MANNING:** Son of the servant.

**MARSHALL:** One who tended horses, especially one who treated their diseases.

**MARTIN, MARTEN, MARTINS:** Descendant of Martinus (from Mars, the god of war).

**MARX, MARKS:** Son of Mark or Marcus (hammer).

**MASON:** Builder with stone.

**MATTHEWS, MATTHIAS:** Son of Matthew (gift of Jehovah).

**MAXWELL:** Dweller by a big spring.

**MAY, MAYES, MAYS:** Descendant of May, a pet form of Matthew (gift of Jehovah).

**McCANN:** Son of Annadh (a storm).

**McCARATHY:** Descendant of Carthach (a friend).

**McCONNELL:** Son of Domhnall (world mighty).

**McCORMICK, McCORMACK:** Son of Cormac (charioteer, or son of Corb).

**McCRACKEN:** Son of Neachtan (the pure one).

**McDERMOTT:** Son of Diarmaid (the freeman or common man).

**McDONALD:** Son of Donald (dark or brown-haired stranger).

**McDONOUGH:** Son of Donnchadh (brown warrior or strong warrior).

**McDOWELL:** Son of a dark foreigner.

**McGOVERN:** Son of little Samhradh (summer).

**McGUIRE:** Son of a pale or light-complexioned man.

**McINTOSH:** Son of a chief or leader.

**MEAD, MEADE:** Dweller at a grassland or meadow.

**MENCKEN:** Inhabitant of a monastery.

**METCALF:** Dweller at or near a meadow where calves were kept.

**MICHAELS:** Descendant of Michael (who is like God).

**MIDDLETON:** One from Middleton (the middle homestead or village), the name of many villages in England.

**MILES:** Descendant of Miles (soldier).

**MILLER, MILLAR, MOLLER, MUELLER, MILNER:** One who grinds grain.

**MILLS, MILL:** Dweller at or near a mill.

**MILTON:** One from Milton (mill enclosure), the name of various villages in England.

**MITCHELL:** Descendant of Michael (who is like to God).

**MONROE, MUNRO:** Dweller near the Roe river in Derry, Ireland.

**MOODY, MOODIE:** Bold, impetuous, brave one.

**MOON:** One from Mohon in France.

**MOORE, MOOR, MORE:** Dweller near a moor, marsh or waste land.

**MORAN:** Grandson of Moran (little great man).

**MORGAN:** Descendant of Morgan (great, bright).

**MORLEY:** Dweller near a waste-land meadow.

**MORRIS, MORICE:** Descendant of Maurice (Moorish, or dark-skinned).

**MORRISON:** Son of Morris (Moorish, or dark-skinned).

**MORROW:** Dweller in a row of houses by a moor; i.e., marsh or waste land.

**MORSE, MOORS:** Son of Moor (dark-complexioned one).

**MORTON:** One from Morton (homestead by a marsh), the name of many places in England.

**MOSES:** Descendant of Moses (saved from the water).

**MOSS:** Descendant of Moss, a pet form of Moses (saved from the water).

**MUELLER:** (see Miller).

**MURDOCK:** Descendant of Murdoch (seaman).

**MURPHY:** Descendant of Murphy (sea warrior).

**MURRAY, MURRY, MURRIE:** One from Morray (beside the sea) in Scotland.

**MYERS, MEYER, MEIER:** Overseer or head servant; later, a farmer.

**NASH:** One who lived "atten ashe," which by wrong division became "atte Nashe"; i.e., at an ash tree.

**NATHAN, NATHANSON:** Descendant of Nathan (gift of God).

**NEAL, NEALE:** Descendant of Nigel or Neil (champion).

**NELSON, NEILSON:** Son of Nel or Neil (champion).

**NEWMAN, NEUMANN:** Recent arrival or newcomer.

**NEWTON:** One from Newton (new village or recent settlement).

**NICHOLS, NICHOLSON, NICHOLLS:** Son of Nichol (people's victory).

**NIXON:** Son of Nick, a pet form of Nicholas (people's victory).

**NOLAN:** Grandson of little Nual (noble, famous).

**NORMAN, NORMAND:** Descendant of Norman (a northman).

**NORRIS:** One from the north country; a northman.

**NOVAK, NOWICKI:** Stranger or newcomer.

**O'BRIEN:** Grandson of Bryan or Brian (hill).

**O'CONNELL:** Grandson of a discreet one.

**O'CONNOR:** Grandson of Conchor (high-will or desire).

**O'DONNELL, O'DONILL:** Grandson of Domnall (world mighty).

**OGDEN, OGDON:** Dweller in an oak valley.

**O'HARA:** Grandson of Eaghra (bitter, or sharp).

**O'KEEFE:** Grandson of Caomh (beautiful, noble).

**O'LEARY:** Grandson of Laoghaire (calf keeper).

**OLIVER:** Descendant of Oliver (elf host).

**OLSON, OLSEN:** Son of Ole or Olaf (ancestor's relic).

**O'NEILL, O'NEAL:** Grandson of Niall (champion or military hero).  
**OPPENHEIMER, OPPENHEIM:** One from Oppenheim (Oppo's place) a German town.  
**O'REILLY, O'RILEY:** Grandson of Raghallach (the sportive one).  
**O'ROURKE:** Grandson of a restive or rushing person.  
**OSBORNE:** Descendant of Osborn (god, man).  
**OVERSTREET:** Dweller at a Roman road by a river bank.  
**OWENS:** Son of Owen (well-born).

**PAGE, PAIGE:** Male servant of the lowest grade; an attendant.  
**PAINE, PAYNE:** Rustic or countryman; a pagan.  
**PALMER:** Palm-bearing pilgrim returned from the Holy Land.  
**PARKER:** Park-keeper or gamekeeper.  
**PARSONS:** Son of a parson.  
**PATRICK:** Descendant of Patrick (noble or patrician).  
**PATTERSON:** Son of Patrick (noble or patrician).  
**PATTON, PATTEN, PATON:** Descendant of little Pat, a pet form of Patrick (noble or patrician).  
**PAUL, PAULL, PAWL:** Descendant of Paul (small).  
**PEABODY:** Dweller at the sign of the peacock.  
**PEALE, PEEL:** Dweller at a fortified residence.  
**PEARSON:** Son on Pears, an early form of Peter.  
**PECK, PEC:** Dweller at or on a pointed hill.  
**PENN:** Dweller near a pen or sheep fold.  
**PENNINGTON:** One from Pennington (village that paid a penny tribute), the name of several villages in England.  
**PERKINS:** Son of little Pier, a pet form of Peter (rock).  
**PERRY:** Descendant of little Pier, a pet form of Peter (rock).  
**PETERSON, PEDERSON, PETERS:** Son of Peter (rock).  
**PFEIFFER, PFEIFER:** One who played a fife or a pipe; a piper.  
**PHILLIPS, PHIPPS:** Son of Phillip (lover of horses).  
**PIERCE, PIERS:** Descendant of Pierce or Piers, early English forms of Peter (rock).  
**PINKHAM:** Dweller at a homestead where chaffinches were found.  
**PLATT:** One who lived on or worked a small piece of ground or patch.  
**POE:** Dweller at the sign of the peacock.  
**POLK:** One from the lands of Pollock (little pool), in Renfrewshire).  
**POLLACK:** One from Poland (level land).  
**POPE:** One who played the part of the Pope in pageants and plays.  
**PORTER:** Carrier; also a gatekeeper.  
**POTTER:** One who made pots of earthenware or metal.  
**POWELL:** Son of Howel (eminent).  
**POWERS, POWER:** Poor one; a pauper.  
**PRATT:** Dweller on or near a meadow.  
**PRICE:** Son of Rhys (ardor, a rush).

**QUINN:** Grandson of Conn (reason, or a freeman).  
**RAMSAY, RAMSEY:** One from Ramsay (ram's isle) in Scotland, or from Ramsey (wild garlic island), the name of two places in England.  
**RANDALL, RANDLE, RANDOLPH:** Descendant of Randal or Randwulf (shield, wolf).  
**RAPPAPORT:** Physician who came from Porto (gate) in Italy.  
**RAYMOND, REYMOND:** Descendant of Raymond (wise protector).  
**REED, REID, READ:** Red-haired or ruddy one.  
**REEVES, REEVE:** Minor official appointed by the lord of a manor to supervise his tenants' work.  
**REGAN:** Descendant of an impulsive man.  
**REINHARDT:** Descendant of Reinhardt or Raginhart (counsel, hard).  
**REYNOLDS:** Son of Regenweald or Reginald (powerful, force).  
**RHODES, RHOADES:** Dweller at a clearing.  
**RICE:** Descendant of Rhys (ardor, a rush).  
**RICH:** Descendant of Rich, a pet form of Richard.  
**RICHARDSON, RICHARDS:** Son of Richard (rule, hard).  
**RICHMOND:** One from Richemont (lofty mountain) in Normandy.  
**RICHTER:** One who held the office of judge.  
**RILEY, REILLY:** Descendant of Reyly (valiant).  
**RIZZO:** One with wavy or curly hair.  
**ROBERTS, ROBERTSON:** Son of Robert (fame, bright).  
**ROBBINS, ROBINS:** Son of little Rob, a pet form of Robert (fame, bright).  
**ROBINSON:** Son of little Rob, a pet form of Robert (fame, bright).  
**ROCKEFELLER:** Dweller near a rye field.  
**ROGERS:** Son of Roger (fame, spear).  
**ROOSEVELT:** Dweller near a rose farm or field.  
**ROOT:** Gay or cheerful man.  
**ROSE:** Dweller at the sign of the rose.  
**ROSENBERG, ROSENBERGER:** One from Rosenberg (rose mountain) in Germany.  
**ROSENTHAL:** One from Rosenthal (rose valley) in Germany.  
**ROSS:** Dweller at a promontory or peninsula.  
**ROTH, ROTHE:** Red-haired or ruddy-complexioned man.  
**ROWE, ROW:** Dweller at a rough or uncultivated land.  
**RUSH:** Dweller near a clump of rushes.  
**RUSSELL:** Red-haired one.  
**RYAN:** Grandson of the little king; corruption of O'Ryan.  
**SACHS:** One from Saxony (now Holstein).  
**SAINT-GAUDENS:** Descendant of Gaudentius (rejoicing), the name of five different saints revered by the Catholic Church.  
**ST. JOHN:** One from St. Jean, a common French place name.  
**SALK:** Dweller near a willow tree.  
**SALTONSTALL:** One from Salternstall in Kent.  
**SAMPSON, SAMSON:** Son of Sam, a pet form of Samuel (God hath heard).



**SANDBURG:** Dweller near a sandy fortified place.

**SANDERS:** Abbreviation of Alexander (helper of mankind).

**SANFORD, SANDFORD:** One from Sandford (sandy ford), the name of several places in England.

**SARGENT:** One who worked as a servant.

**SAROYAN:** Corruption of the Armenian *Saro Khan* (mountain prince).

**SAUNDERS:** Son of Saunder, an abbreviation of Alexander (helper of mankind).

**SAWYER, SAWIER:** One who cut timber into boards.

**SCHAEFER, SCHAFFER:** One who took care of sheep; a shepherd.

**SCHILLER:** One having the habit of squinting his eyes; a squinter.

**SCHMIDT, SMIDT:** German forms of Smith, a worker in metals.

**SCHNEIDER:** One who made outer garments; a tailor.

**SCHROEDER:** Cutter; tailor.

**SCHUBERT, SCHUMACHER:** One who made shoes.

**SCHULTZ, SCHULZ, SCHULZE:** Magistrate or sheriff.

**SCHUSTER:** One who made and repaired shoes; a cobbler.

**SCHWARTZ, SCHWARZ, SWARTZ:** Of a dark or swarthy complexion; black.

**SCHWEITZER:** One from Switzerland; a Swiss.

**SCOTT:** One from Scotland.

**SHAKESPEARE, SHAKSPERE:** Dweller on a peasant's farm; also nickname for a soldier; one who wielded a spear.

**SHANNON:** Grandson of little Seanach (old or wise).

**SHAW:** Dweller at a wood or grove.

**SHEPARD, SHEPHERD:** One who tended sheep.

**SHERIDAN:** Descendant of Shridane (peaceful).

**SHERMAN:** Shearman or cutter of wool or cloth.

**SHERWOOD:** One from Sherwood in Nottinghamshire (the wood belonging to the shire or county).

**SIEGEL:** Descendant of little Sigo, a pet form of names beginning with Sieg (victory), as Sigvald.

**SIMMONS:** Son of Simon or Simeon (gracious hearing).

**SIMPSON:** Son of Sim, pet form of Simon or Simeon (gracious hearing).

**SIMS, SIMMS:** Descendant of Sim, a pet form of Simon or Simeon (gracious hearing).

**SINCLAIR:** One from St. Clair (bright), the name of several places in Normandy.

**SKELTON:** One from Skelton (the hill or bank manor), the name of parishes in Yorkshire and Cumberland.

**SKINNER, SKYNNER:** One who prepared skins.

**SLOAN:** Grandson of Sluaghan (soldier or warrior).

**SMITH, SMYTH, SMYTHE:** Worker in metals.

**SNODGRASS:** Dweller at a smooth, trim, grassy place.

**SNYDER, SCHNEIDER:** One who made outer garments; a tailor.

**SOLOMON:** Descendant of Solomon (peaceful).

**SPELLMAN:** Preacher or orator.

**SPENCER, SPENSER:** One who dispensed or had charge of the provisions in a household.

**SPRINGER, SPRINGS:** Dweller at a spring or stream.

**STANLEY, STANDLEY:** One from Stanley (stony meadow), the name of several places in England.

**STANTON:** One from Stanton (homestead on stony ground), the name of many places in England.

**STARK, STARKS, STARKE:** Strong, severe one.

**STARR:** Dweller at the sign of the star.

**STASSEN:** Son of Stass, a pet form of Anastasius (resurrection).

**STEARNS, STERN, STERNE:** Severe austere man.

**STEELE, STEEL:** One from Steel (stile, or place where one has to climb), the name of places in Northumberland and Shropshire.

**STEFANSSON:** Son of Stefan (crown or garland).

**STEINBECK:** Dweller near a stony stream.

**STENGEL:** Dweller near a small pole or stake.

**STEPHENS, STEVENS, STEVENSON:** Son of Stephen (crown or garland).

**STERLING:** One from Stirling (dwelling of Velyn) in Scotland.

**STEWART, STUART, STEWARD:** Keeper of a sty, pen or hall; later, manager of a household.

**STOKES:** One from Stoke or Stokes (monastery, cell, place, or outlying farm), a very common place name in England.

**STONE, STINE, STEIN:** Dweller near a stone or rock, a boundary mark.

**STOWE:** Dweller near a holy place, probably a monastery or church.

**STRAUSS:** Dweller at the sign of the ostrich.

**STRITCH:** Dweller at a street or paved road.

**SULLIVAN:** Grandson of Sullivan (black-eyed); corruption of O'Sullivan.

**SUMMERS:** Petty officer who warned people to appear in court; a summoner.

**SWEENEY:** Son of a peaceful or quiet one.

**TAFT:** Dweller at a toft, a yard enclosing a residence.

**TATE:** One with a large or peculiar head.

**TAYLOR:** One who made outer garments; a tailor.

**THOMAS:** Descendant of Thomas (a twin).

**THOMPSON:** Son of Tom, pet form of Thomas (a twin).

**THORNTON:** One from Thornton (place where thorn bushes grew), the name of many places in England.

**TILLMAN:** One employed in tilling the soil.

**TOBIN:** Descendant of little Tob, a pet form of Tobias (Jehovah is good).

**TODD:** Dweller at the sign of the fox.

**TOWNSEND:** Dweller at the outskirts of a village.

**TOYNBEE:** Dweller at Teoda's place.

**TRACY:** One from Tracy in Normandy.  
**TRUMAN:** Faithful or loyal servant.  
**TUCKER:** One who cleaned and thickened cloth.  
**TURNER:** One who fashioned objects on a lathe.  
**TYLER:** One who made or sold tiles, or who covered buildings with tiles.

**UNDERWOOD:** One from Underwood (within a forest), the name of several places in England.

**VANDERBILT:** Dweller near a heap or mound.

**VAUGHN, VAUGHAN:** Descendant of Vaughan (litttle).

**WADE:** Dweller at a shallow river crossing.

**WAGNER, WAGONER:** Driver of a wagon.

**WAINWRIGHT:** One who made wagons and carts.

**WALKER:** One who cleaned and thickened cloth; a fuller.

**WALLACE, WALLIS, WALSH, WELCH:** Man from Wales; a foreigner or stranger.

**WALTERS:** Descendant of Walter (rule, army).

**WARD, WARDEN, WARDER:** Guard or watchman.

**WARE:** One from Ware (dam or fish trap) in Hertfordshire.

**WARNER:** Descendant of Warner (protecting warrior).

**WARREN:** Dweller at or keeper of a game preserve.

**WASHINGTON:** One from Washington in Durham, the manor of the Wessyns; i.e., the family of Wes.

**WATERS, WATTERS:** Descendant of Walter (rule folk), the early pronunciation of the name.

**WATKINS:** Son of little Wat, a pet form of Walter (powerful warrior).

**WATSON:** Son of Wat. (See Watkins.)

**WATTS, WATT:** Descendant of Wat, a pet form of Walter (rule folk).

**WEAVER, WEBB, WEBER, WEBSTER:** Weaver of cloth.

**WEST:** One from the west; a west countryman.

**WEXLER, WECHSLER:** One who was a banker or money-changer.

**WHEELER:** Maker of wheels and wheeled vehicles.

**WHISTLER:** Whistler or piper.

**WHITE:** Light- or fair-complexioned one.

**WHITTIER:** White tawer or dresser of white leather.

**WILEY, WYLIE:** Dweller near a trap or mill.

**WILKINS, WILKINSON:** Son of little Will, a pet form of William.

**WILLARD:** Descendant of Wilheard (resolute, brave).

**WILLIAMS, WILLIAMSON:** Son of William (helmet, resolution).

**WILLIS, WILSON:** Son of Will, a pet form of William. (See Williams.)

**WINSLOW:** One from Winslow (Wine's burial mound) in Buckinghamshire.

**WOLF, WOLFF:** Dweller at the sign of the wolf.

**WOOD, WOODS:** Dweller at a wood.

**WOODWARD:** Officer who had charge of a wood; a forester.

**WRIGHT:** Worker in wood or other hard material.

**YATES:** Dweller in or near the gate, or gap in a chain of hills.

**YOUNG:** One younger than another with whom he was associated.

### Wedding Anniversary Gifts

Source: *Encyclopaedia Britannica*.

5th year—wood  
 10th year—tin

15th year—crystal  
 20th year—china

60th year in Great Britain, 75th year in America—diamond

25th year—silver  
 50th year—gold

## Waldorf-Astoria Recipes Created for World Celebrities

In each edition beginning with 1955 we have brought to our readers recipes not available in conventional cook books.

Our first group of recipes in the 1955 edition were supplied by famous restaurants of the world. Our second group in the 1956 edition were provided by deluxe ocean liners.

In this current edition we are happy to include recipes of dishes prepared by the Waldorf-Astoria for famous dinners and luncheons in honor of world celebrities.

The Waldorf-Astoria has been host to the great and near-great from the four corners of the world. Its position as a hotel is unique—it is accepted by most people as the hotel of the nation.

In addition to the recipes, we thought it would be interesting to include on page 66 a copy of an actual menu for one of their many dinners for celebrities.

## RECIPES

### Hot Petits Choux au Gruyère

$\frac{1}{2}$ cup milk	2 eggs
$\frac{1}{4}$ cup butter	2 oz. gruyère
Pinch of salt	cheese, grated
$\frac{1}{2}$ cup flour	( $\frac{1}{2}$ cup)

In saucepan combine milk, butter and salt and bring to boil. When butter is melted, add flour all at once and cook, stirring constantly until dry (mixture will become a smooth compact mass). Remove from heat and add eggs one at a time, beating until each is blended in and a smooth soft paste is obtained. Stir half of cheese into mixture. Drop by teaspoonsful or press out walnut-size rosettes from star tube onto buttered pans. Sprinkle with remaining gruyère cheese. Bake in 450° F. oven 10 minutes, then at 350° F. for 10 to 15 minutes more. Split and fill each with cheese fondue. Keep hot over hot water. Makes 24 to 30 petits choux.

#### Cheese Fondue

$\frac{1}{2}$ cup dry white	Pinch of salt
wine	Pinch of flour
$\frac{1}{2}$ lb. grated or	( $\frac{1}{4}$ teaspoon)
cube imported	
Swiss cheese	

Heat wine to boiling; stir in cheese, salt and flour.

### Fumet of Gumbo Chervil

$\frac{1}{2}$ medium onion,	$\frac{1}{4}$ bay leaf
chopped	Small pinch
1 tablespoon but-	thyme
ter	2 teaspoons salt
1 lb. chopped beef	3 qts. bouillon
(chuck or	1 egg white,
round)	slightly beaten
2 leeks, chopped	$\frac{1}{2}$ cup minute
$\frac{1}{4}$ stalk celery,	tapioca
chopped	Fresh chervil
1 medium carrot,	
chopped	

In soup pot, brown onion in butter. Add beef, leeks, celery, carrot, bay leaf, thyme, salt and bouillon and bring to boil. Then simmer for about 2½ hours. Strain through cheesecloth. There should be 1 quart. Add egg white; boil; strain. Add tapioca and cook, stirring, for about 5 minutes, until soup thickens and tapioca clears.

Serve with fresh chervil leaf on top. Makes 4 to 6 servings.

### Key West Turtle Soup

$\frac{1}{2}$ cup shredded	Pinch of black
sorrel or lettuce	pepper
Contents of a 2	4 egg yolks,
lb. 3 oz. can of	beaten
clear green tur-	1 cup heavy
tle soup	cream
Pinch each of	$\frac{1}{2}$ cup dry sherry
savory, sage,	wine
thyme, corri-	
ander	

Wash sorrel well and cook until soft (no water need be added to the wet leaves). Set aside. Remove pieces of turtle meat from soup and cut up into small squares. Add savory and rest of spices to turtle broth and bring to boil. Pour broth over egg yolks, stirring constantly. Add cooked sorrel, cream, wine and turtle meat. Serve very hot. Makes 6 servings.

### Bisque of Maine Lobster

2 tablespoons	2 tablespoons raw
salad oil	rice
1 diced carrot	1 tablespoon flour
1 minced onion	1 qt. chicken
1 1¾-lb. lobster,	bouillon
cut in pieces	$\frac{1}{2}$ 6-oz. can to-
Pinch of thyme	mato paste
$\frac{1}{3}$ bay leaf	2 fresh tomatoes,
$\frac{1}{2}$ cup brandy	diced
$\frac{1}{2}$ cup white wine	$\frac{1}{2}$ to 1 cup cream
Pinch of salt	

Sauté in oil until golden the carrot, onion and lobster. Add thyme, bay leaf, brandy, wine and salt and simmer a few minutes. Stir in rice and flour, then bouillon, tomato paste and tomatoes. Cook, stirring occasionally, for 15 to 20 minutes. Remove pieces of lobster, separate meat from shell and chop very, very fine. Set this aside. Strain rest of mixture through cheesecloth. Add cream (should be  $\frac{1}{2}$  of total amount of bisque). Add lobster and season to taste. Serve piping hot. Makes 6 servings.



### Fillet of Lemon Sole with Lobster à l'Américaine

*Lobster à l'Américaine*

- |                                |                             |
|--------------------------------|-----------------------------|
| 1 tablespoon butter            | 1 1½-lb. boiled lobster     |
| 2 finely chopped shallots      | Tomally (the lobster liver) |
| ¼ cup brandy                   | 1 tablespoon butter         |
| ½ cup tomato sauce             | 1 teaspoon flour            |
| ½ cup white wine               | Salt and pepper to taste    |
| 1 minced clove garlic          | ½ teaspoon chopped tarragon |
| 3 tomatoes, peeled and chopped |                             |

In saucepan melt 1 tablespoon butter; add 2 finely chopped shallots, brandy, tomato sauce, ½ cup white wine, garlic and tomatoes. Cook 20 minutes and strain. Crush tomally and cream it with 1 tablespoon butter and flour. Season with salt, pepper and tarragon. Stir into sauce and cook for a few minutes, stirring constantly. Remove lobster from shell, cut it into pieces and add it to the sauce.

#### *Fillet of Lemon Sole*

- |                                |                                    |
|--------------------------------|------------------------------------|
| 2 tablespoons butter           | ¼ cup fish stock (optional)        |
| 2 finely chopped shallots      | 2 tablespoons butter               |
| 4 fillets lemon sole, folded   | 2 tablespoons heavy cream, whipped |
| ½ cup white wine               |                                    |
| 2 to 3 tablespoons lemon juice |                                    |

In saucepan melt 2 tablespoons butter and add remaining shallots and fillets seasoned with salt and pepper. Add ½ cup white wine, lemon juice and stock. Cook about 5 minutes. Remove fillets to serving platter and keep warm. Reduce liquid to ⅓. Add 2 tablespoons butter and whipped cream. Spread over fillets and run under broiler to glaze. Fill center of platter with lobster sauce. Makes 4 servings.

### North Carolina Shad Roe Stuffed with Purée of Sorrel

- |                           |                                |
|---------------------------|--------------------------------|
| 1½ lbs. sorrel            | ¼ cup fish stock               |
| 1 tablespoon butter       | 2 tablespoons butter           |
| 4 fresh shad roe          | 2 to 3 tablespoons lemon juice |
| 1 tablespoon butter       | 1 tablespoon minced chives     |
| 2 finely chopped shallots | Salt & pepper                  |
| ½ cup white wine          |                                |

Wash sorrel thoroughly and drain. Cook sorrel with water that clings to leaves 10 minutes or until soft. Drain off water. Press sorrel through sieve and season with 1 tablespoon butter, salt and pepper. Split roe and use sorrel to stuff it. In skillet cook 1 tablespoon butter, shallots, wine, stock, salt and pepper until butter melts. Add stuffed roe and cook 10 minutes. Remove roe to serving platter and keep warm. Reduce liquid by ⅓. Add 2 tablespoons butter, juice and chives but do not boil. Season to taste. Pour sauce over roe. Makes 4 servings.

### Breast of Chicken Astoria

- |  |                                  |
|--|----------------------------------|
| 4 chicken breasts (from 3½-lb. chickens) | 2 finely chopped shallots        |
| 4 teaspoons butter                       | ½ cup white wine                 |
| Salt & pepper to taste                   | 2 tablespoons butter             |
| 8 slices cooked tongue                   | 1 teaspoon finely chopped chives |
| 12 mushroom caps                         | 2 tablespoons lemon juice        |

Broil chicken breasts seasoned with salt and pepper and dotted with butter. Warm slices of tongue under broiler. On platter arrange each chicken breast on 2 slices of tongue. Simmer mushrooms and shallots in wine. When mushrooms are cooked place them on top of chicken. Reduce liquid to ⅓. Add butter, chives, lemon juice. Season to taste with salt and pepper and pour over chicken. Makes 4 servings.

### Cold Fillet of Beef Strasbourgeoise

- |                        |                  |
|------------------------|------------------|
| 1 whole fillet of beef | Dry sherry aspic |
| About 2 cups foie gras | (See p. 65)      |

Trim fillet about 1 inch on each end. Roast 30 to 35 minutes in 450° F. oven. When partially cool, insert a uniform carrot (or clean dowel stick) through center of fillet lengthwise. When the roast is completely cool, remove carrot or stick and stuff with foie gras. Chill, slice and serve on bed of dry sherry aspic.

### Dry Sherry Aspic

1 lb. veal bones	3 qts. water
1 lb. beef bones	1 tablespoon salt
Sprig of parsley	$\frac{1}{2}$ teaspoon pepper
1 onion, sliced	1 egg white,
1 leek, sliced	slightly beaten
1 carrot, cut up	$\frac{1}{4}$ cup very good
1 stalk celery	dry sherry

In soup pot, place bones, parsley, onion, leek, carrot, celery, water, salt and pepper. Bring to boil and simmer gently 4 hours, skimming as necessary. Strain and stir in egg white to clarify. Bring to boil and strain through fine cloth. Add sherry and chill. Makes about 1 quart.

### Vibo Farm Rock Cornish Hen

3 cups cooked wild rice	$\frac{1}{2}$ teaspoon flour
3 tablespoons foie gras	2 to 3 tablespoons lemon juice
4 $1\frac{1}{4}$ -lb. Rock Cornish hens (have each completely boned)	$\frac{1}{4}$ cup beef bouillon
2 finely chopped shallots	2 tablespoons butter
$\frac{1}{3}$ cup white wine	1 teaspoon finely chopped chives
	$\frac{1}{4}$ cup green grapes

Combine rice and foie gras. Sew opening of hens, leaving just enough room to stuff with rice mixture. Roast in 475° F. oven 20 to 30 minutes or until hens are done. Remove hens to platter. Drain off any fat from roasting pan and stir shallots, wine, flour, lemon, bouillon, butter and chives into roasting pan. Cook, stirring over low heat, until a smooth hot sauce is obtained. Add grapes to sauce and pour over hens. Makes 4 servings.

### Chestnut Stuffing

2 tablespoons butter (or half butter and half goose fat)	kitchen bouquet
$\frac{1}{2}$ minced medium onion	Pinch of allspice
$\frac{1}{4}$ cup minced celery	1 cup raw rice
1 tablespoon	$1\frac{1}{2}$ cups bouillon or water
	1 cup cooked chestnuts

Melt butter in saucepan and add onion, celery, kitchen bouquet, allspice and rice. Stir over high heat for a few minutes,

add bouillon (or water) and cook for about 20 minutes more, or until rice is tender. Add chestnuts. This will make enough to stuff the body cavity of an 8- to 10-lb. bird (drawn weight).

### Paté Maison

2½ lbs. fresh chicken livers	$\frac{1}{4}$ teaspoon each mace, nutmeg,
3 eggs, slightly beaten	clover, sage, marjoram
$\frac{1}{2}$ cup Madeira wine	1 cup heavy cream
1 teaspoon salt	
$\frac{1}{4}$ teaspoon pepper	

Pass liver through meat grinder twice (makes about 3 cups, ground). Place ground liver in mixing bowl and stir in eggs, wine, salt and spices. Place bowl over shaved ice. Add cream a little at a time, stirring constantly. Grease a paté mold or baking dish of 6-cup capacity and set in pan of hot water. Bake in 525° F. oven 25 to 30 minutes or until water begins to boil. Reduce heat to 350° F. and bake 1½ hours or until silver knife inserted in center comes out clean. When the paté is chilled, unmold it on to a serving platter.

### Hot Soufflé of Raspberries

$\frac{1}{2}$ cup sifted all-purpose flour	$\frac{1}{2}$ pint washed fresh raspberries, or sliced strawberries
$\frac{1}{4}$ cup butter	2 to 3 teaspoons lemon juice
$\frac{1}{4}$ to $\frac{1}{2}$ cup granulated sugar	4 egg whites, stiffly beaten
$1\frac{1}{2}$ cups boiling milk	
4 egg yolks, slightly beaten	

Combine flour, butter and sugar to form smooth dough. Stir in milk and mix well. Cook mixture until it becomes a soft, smooth paste. Beat egg yolks into mixture and add berries sprinkled with lemon juice. Fold egg whites into berry mixture. Turn into buttered soufflé dish ( $1\frac{1}{2}$ -qt. capacity). Bake in 450° F. oven for 25 to 30 minutes. Makes 6 servings.

## Dinner in Honor of

The Rt. Hon. Lord Mayor of London  
at the Waldorf-Astoria, May 2, 1956.

Besserat de Bellefon Champagne  
Dry Waldorf Sherry, Premium  
Brand—Scotch, Rye & Bourbon  
Cocktails passed on trays.  
Very Dry Martinis

*Finest Beluga Caviar*  
*(Served from 4 1/2 lb. tin in an artistic ice socle)*  
*on Freshly-made Blinis and Toast*  
*With Sour Cream, Chopped Eggs,*  
*Chopped Onions and Drawn Butter*  
*Hot Petits Choux au Gruyère, Mille Feuille,*  
*Jalusie a l'Ementhal*  
*Bâtonnets de Brie Frits, Petits Ramequins,*  
*Duchesses à la Reine, Parfait de Foie Gras en Croûte*

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Waldorf  
Amontillado Fino

*Consommé Dame Blanche*  
*with Tiny Crust*  
*Diced Chicken and Truffles*

Chablis Vaillon, 1950

*Homard Flambé Mephisto*

Musigny 1949

*Saddle of Spring Lamb Persillé*  
*Own Gravy*  
*Small Steamed New Potatoes*  
*Artichoke Bottoms Clamart*

*Calvados Sherbert*

Moët & Chandon  
Dom Perignon 1943

*Cold Connecticut Quail*  
*Stuffed with Waldorf Pâté*  
*Presented en Bellevue*  
*Kentucky Bibb Lettuce & Balls of Avocado Pear*  
*Oil and Lemon Dressing*

*Soufflé de Gruyère*

Château d'Yquem 1945

*Pear Glacé St. Esteophe*  
*with its Garniture*

Godet Cuve 1951, Marsan  
Armagnac Private Reserve  
Vieille Cure, Green Mint Frappe

*Pistolet Rolls*  
*Café Brûlot*



# JETS—MISSILES—ROCKETS

By

WILLY LEY

Author of *Rockets, Missiles and Space Travel* and  
*The Conquest of Space*



FIFTY YEARS AGO a Prague banker, turned writer, wrote a short fable which he claimed to be a Far Eastern legend. It related that one hot day a toad was sitting in the shade of a tree when an enormous centipede hurried by. "Stop for a moment," said the toad. "I always meant to ask you something." The centipede obligingly stopped and the toad continued: "When you run along like this, do you first lift your first leg on the left side, then your first leg on your right side, then your second leg on your left side and so forth, or do you first move all the legs on one side and then all the legs on the other side?" The centipede opened his mouth to answer, then settled down, twitched a few legs, but did not say anything. Since he couldn't answer he also couldn't move any more. And so he sat until he died of starvation.

Modernizing this idea, one might say that if the motion of an automobile depended on the knowledge of an average driver of how and why it moves, or if the take-off of an airplane depended on the passenger's knowledge of all the natural forces involved, the car would stay in the garage and the plane remain at the end of the runway.

Fortunately, one usually needs to know only that a car or plane works; knowledge of the "how" is required only for understanding, for improvement or for prediction. And if the "how" is misunderstood, a situation comparable to the immobilized centipede can easily develop. This is nicely illustrated by an argument from the annals of engineering which took place during the early days of the nineteenth century.

## TRACTION AND REACTION

For centuries people used oxen, horses (or other people) to pull carts. At the time of the Napoleonic Wars, a new power source became available—the steam engine. The normal job of early steam engines was to operate pumps to keep miners from drowning. But there were visionaries who wanted to build a steam engine small and light enough to be loaded on a car. They insisted that the steam engine would then be able to propel a car, and that this car would not only propel itself but also pull other cars with goods and passengers.

They were told that this would not work. A track or a rail is a straight line. A wheel is a circle. The circle and the straight line touched at only *one point*. How could they expect traction from something that touched in one point only? The little friction one might get at that point would "obviously" not be enough. The steam engine on the car would be able to turn the wheels, but the wheels would slip.

As long as a horse pulled a wagon on

a track this did not matter, for the horse's hooves pushed against the ground at an angle. But to try to turn the wheels by a power source on the wagon itself was described as sheer nonsense. Some inventors, overwhelmed by this argument, made the driving wheel a cogwheel and added a notched rail to the track. We still do this for steep grades in mountainous areas and with small railroads. It was learned quickly that traction was enough, as neither the rail nor the wheel are absolutely stiff and inelastic, and they touch in a great many points.

All land surface vehicles, virtually without exception, move by traction on the ground, whether they are bicycles, cars, railroads, trucks or army tanks. The principle underlying the motion of a floating vehicle is different. A steamship does not move because of friction and traction; it moves by a most modern-sounding principle, namely by reaction. What happens can be understood if we think of the old side-wheeler or stern-wheeler. The blades

of the slowly turning wheels scooped up water and threw it backwards. The curved blades of the modern ship's propeller do the same thing more efficiently. Just as the curved blades of an electric fan produce a steady stream of air, the ship's propellers produce a steady stream of water, which is thrown backwards.

If you throw something, by whatever means, you get involved in the action and reaction principle introduced by Sir Isaac Newton as the Third Law of Motion. If you create an action, there must be a reaction. You fire a gun, throwing the bullet, and the gun kicks back. Heave a heavy rock across a ditch, and you stumble backward.

Logically, then, the effort of the ship's propeller to throw a heavy load of water backward will push the ship forward. The load that is thrown does not need to be water; it can be air, and an airship moves because its propeller throws air backward. The airship resembles the steamship in that the activity of the power plant is required for motion only. A ship can float on the surface of the water and an airship can float in the air with a stalled engine. Of course they are then helpless, but they do float.

There are a number of methods by which air can be scooped up and thrown backward to produce reaction. The most common method still used is the piston engine working in combination with a propeller. The piston engine converts the straight-line back-and-forth motion of the pistons into the rotary motion of the main engine shaft. The propeller is attached to this shaft and its blades produce the air stream which moves the plane. In the turbojet we have no pistons, but the multibladed turbine wheels which produce rotary motion directly. The exhaust of this turbojet—the engine which powers all the jet fighters, bombers and airliners—consists not just of air, as in the backblast from a propeller. It consists in part of the combustion gases which result from burning the fuel with the oxygen in the air. A large proportion of the exhaust blast is simply nitrogen gas which was sucked into the air intake of the engine but, since it is not combustible, went through the engine without change.

The exhaust of a turbojet engine is much faster than the backblast of a propeller—one might say that the turbojet throws the air backward harder—which explains why jet aircraft are faster. There is a kind of in-between engine much used right now which is called a turboprop. As the name indicates, it is a turbine-driven propeller. In this mixed assembly more than half of the total thrust is de-

rived from the propeller; the rest is due to direct jet exhaust.

These three types of power plants—piston engine with propeller, gas turbine which drives propeller and is supplemented by jet exhaust, and gas turbine which produces jet exhaust only—comprise the engines in today's airplanes.

There are two other types of jet engines—the pulsejet and the ramjet—which are cheaper to make than the turbojet, but they are used for missile propulsion only. They do not work when the plane is moving through the air slowly; hence the plane would be powerless just when instant power reserve is needed most, particularly during the approach to the runway in landing.

While ground vehicles move by traction, and water and airborne vehicles move by reaction, they have several things in com-

## AIRCRAFT AND MISSILE POWERPLANTS

**Piston Engine and Propeller.** Used for all types of airplanes, from small private craft to large passenger liners. Speed range: from 60 mph to about 360 mph. Does not work well at altitudes above 25,000 feet.

**Gas Turbine and Propeller (Turboprop).** Used for some airliners of around 300 mph. Since the gas turbine produces rotary motion directly, there is less vibration than in the case of the piston engine.

**Turbojet.** Straight gas turbine producing jet exhaust. Used for fighter planes, bombers and some passenger airliners. Speed range: from about 400 mph to faster than sound. Preferred altitudes: 20,000 to 40,000 feet.

**Pulsejet.** A jet engine which is merely a pipe with simple air intake valves in front. When the vehicle is moving, air pressure forces the valves open, admitting air. When fuel is injected and burned, the combustion pressure closes the valves. This cycle repeats several hundred times per minute. First used in the German V-1 Flying Bomb. Needs take-off help, works very poorly at low speeds, hence not used for manned vehicles. Speed range: 300 to 500 mph.

**Ramjet.** A still simpler jet engine consisting of a pipe open at both ends with fuel injection in the middle. Operates on the ram pressure produced at high speeds; does not work at all at low speeds. Used for missiles only. Speed range: 400 mph to supersonic.

All these engines need air to work and are therefore called "air-breathing engines."

mon. One is that the majority of them are powered by what aeronautical engineers call air-breathing engines.

There are only three types of power plants that are not air-breathing. The old-fashioned electric streetcar is one example, because the electric motor does not need air to work in. The atomic-powered submarine is another, as atomic reactors are self-sufficient. The third is the rocket, which will be discussed soon; it avoids the necessity for breathing air because it carries with it the oxygen needed for the combustion of fuel.

All piston engines are air-breathing, all turbines are, and even the high-speed devices like pulsejet and ramjet need air to burn their fuel. None of them could perform at altitudes appreciably greater than, say, 65,000 feet. The air at that height has the same composition as the air nearer

the ground (in round figures: 79% nitrogen, 20% oxygen and 1% argon and other gases) but there is so little air present beyond that altitude that normal combustion cannot be sustained by it. Using various engineering tricks to compress the available air, the limit up to which an air-breathing engine can operate might be pushed to about 80,000 feet at best.

Another thing which all vehicles—ground-bound, floating or flying—have in common is that they require power all the time they are in operation. In case of power failure you try to get off the road just as fast as you can; or if in the air you look for the nearest airport. Only the floating vehicles—ships and airships—have a period of grace; they can drift while repairs are being made. But a powered vehicle is not in operation while there is no power.

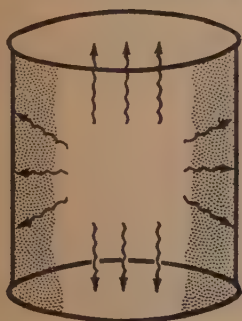
## HOW ROCKETS WORK

As mentioned before, rockets are not air-breathing. This applies to any type of rocket, from the small ones used on the Fourth of July to high-altitude rockets like the Navy's Viking or to long-range missiles like the Army's big Redstone. It applies also to the JATO units which throw an airplane or a guided missile like the Matador into the air.

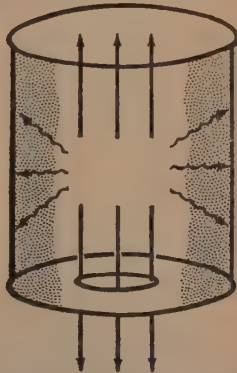
The rocket is one of the reaction engines, but it differs from a jet in one important aspect. The exhaust blast of a jet

engine which propels the plane consists of a mixture of combustion gases, plus the 79% nitrogen which came into the air intake along with the oxygen but did not take part in the combustion process. The exhaust of the jet engine therefore is a mixture of combustion gases. To understand just what happens in a rocket, look at Diagram No. 1. If you had a closed container, say a tin can, filled with a compressed gas, the gas would exert pressure on all the walls of the tin can—top, bot-

## THE PRINCIPLE OF ROCKET PROPULSION



CLOSED CONTAINER WITH GAS UNDER PRESSURE. THE FORCES ON THE WALLS FROM THE INSIDE CANCEL OUT, NO MOTION.



SAME CONTAINER WITH HOLE IN BOTTOM. THE GASES CAN ESCAPE THROUGH THAT HOLE, CONSEQUENTLY, THE PRESSURE AGAINST THE TOP FROM THE INSIDE IS NOT CANCELED SO THRUST AND MOTION RESULT.



tom and all around. These pressures, if the can is strong enough to hold them, equalize each other. But if the can suddenly acquired a hole in the bottom, the pressures would not equalize each other. There would still be pressure all around the wall. There would be pressure from the inside against the top of the can. But the equalizing pressure against the bottom would be lacking, for there the gas can now escape. Hence pressure against the top of the can from the inside is left, and if that is powerful enough it will lift the can.

If you made this experiment, the lifting force, called thrust, would not last long. There would be a whoosh of escaping gas, and for the duration of the whoosh you'd get thrust. Then it would be all over. For this reason a rocket is not charged with a compressed gas, but with a substance which, when burned, will produce a compressed gas. As long as compressed gas is produced by burning a fuel, there is this imbalance of internal pressures, which appears as thrust.

The simplest substance which will produce a compressed gas is ordinary black gunpowder, known since about A.D. 1200. The first rockets of which we know were used in China in 1232. For seven centuries until about 1925, all rockets were fueled with gunpowder-like mixtures which differed in composition from "true" gunpowder by containing a high proportion of pulverized charcoal. This slowed their burning. In these mixtures the charcoal and the sulfur were the fuel proper, while the saltpeter provided the oxygen to burn the fuel. The mixture was literally hammered into the rocket tube to condense it as much as possible. The burning took place on the surface of a conical center hole which did not go all the way through the charge. Since burning was restricted to this specific cone, such rockets were later called "restricted burning" rockets.

In modern rockets, the fuel is often a cordite-like explosive, technically known as a double-base powder (because it is based on a mixture of guncotton and nitroglycerin) and popularly dubbed smokeless powder. The charge, which often has the form of a thick-walled tube, is suspended freely in the rocket tube and burns both from the outside in and from the inside out. This is an unrestricted burning rocket.

Rockets fueled by combustible liquids, such as ethyl alcohol, with liquid oxygen in a separate tank, are a special class, logically called liquid-fuel rockets.

Once it is clearly understood how a rocket moves, one can see at once why a rocket can move in airless space. The rocket does not need air for the combus-

tion of its fuel. The rocket also does not need air as reaction mass as do the propeller and the jet engine. Throwing away part of its own mass, namely the fuel, the rocket can move whether it is under water, in the atmosphere, or in airless space. In fact it will obviously move best in airless space since there is no resistance to be overcome.

In one more important aspect, the rocket differs from other vehicles on land or sea or in the air: these require power all the time they are operating. To show how a rocket differs, let us study the flight of the German V-2 rockets (fueled by ethyl alcohol and liquid oxygen) fired against London, mostly from Dutch soil. The V-2, like all later large liquid-fuel rockets, took off vertically for the reason that a large rocket is not too stable at the beginning of its flight and the stability is best when it rises vertically. After the rocket had accelerated vertically for 8 or 10 seconds, with a fuel expenditure of 280 pounds per second, a built-in mechanism began to tilt it slowly in the direction of the target. The tilt was continued until the nose of the rocket pointed upward at an angle of about 49° measured from the horizontal. When this degree of tilt was accomplished, the rocket continued to accelerate in a straight line until all its 8 tons of fuel were used up. At that instant, the rocket was about 20 miles above ground and roughly the same number of miles from its take-off site, measured horizontally.

All this took place about 65 seconds after take-off, leaving the rocket without engine power. But there were 4 tons of matter (3 tons of rocket structure and one of warhead) traveling at one mile per second. Four tons of matter moving at that rate insures terrific momentum. The rocket continued rising at a slant until it reached the halfway point of its trajectory from take-off site to target. That halfway point was about 100 miles from the take-off site, measured along the ground. But the rocket was then about 60 miles up. Now came the second half of the trajectory, the descending leg as it is called, to distinguish it from the first half, or the ascending leg. The descending leg carried the rocket for another 100 miles, so that it crashed into the target 200 miles from the take-off site, 340 seconds after take-off.

After the war, more than 60 V-2 rockets were fired in the United States for research purposes, most of them from the White Sands Proving Ground in New Mexico. Virtually all were fired nearly vertically, so that they would fall back within the confines of the proving ground. In such a near-vertical shot, the fuel supply also

gave out 20 miles above ground, but because the rocket had been tilted only very slightly, it could climb to a total altitude of more than a hundred miles. The official record for the V-2 is 114 miles, but one fired outside the official program reached 128 miles; and a few years later a Viking rocket succeeded in climbing to

158½ miles. In rocket travel, therefore, the time during which the power is on is relatively short. One might even say that the trip really begins at the instant the flame in the rocket motor winks out. From that moment on, the rocket behaves like a projectile, which also travels on momentum.

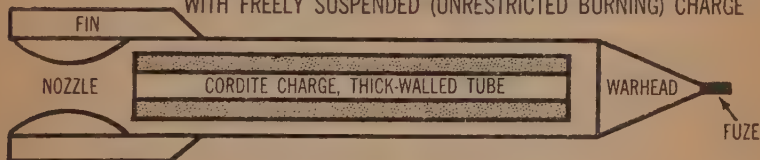
## TYPES OF ROCKETS

### FIREWORKS ROCKET WITH WALL-FITTING CHARGE (SO-CALLED RESTRICTED BURNING PROPELLANT CHARGE)

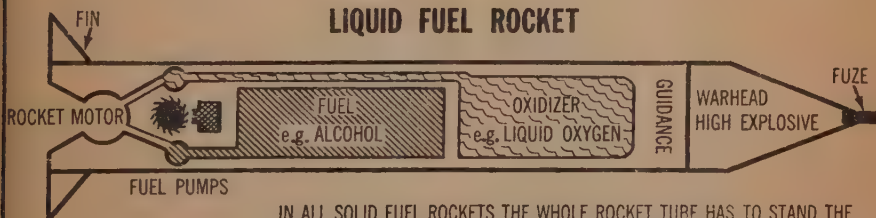


### MILITARY BOMBARDMENT ROCKET

WITH FREELY SUSPENDED (UNRESTRICTED BURNING) CHARGE



### LIQUID FUEL ROCKET



IN ALL SOLID FUEL ROCKETS THE WHOLE ROCKET TUBE HAS TO STAND THE HEAT AND STRESS OF COMBUSTION. IN A LIQUID FUEL ROCKET ONLY THE ROCKET MOTOR HAS TO STAND THE HEAT AND HIGH PRESSURE EXTENDS ONLY FROM FUEL PUMPS TO MOTOR.

## ROCKETS AND MISSILES

To forestall misunderstanding, it might be useful to note the differences between a rocket and a guided missile. The dictionary says anything thrown is a missile; for this reason some writers use the words rocket and missile interchangeably.

In modern military usage, missile means something that can be guided after firing, and the military use of the word guided does not include the idea of aiming. The tank-destroying bazooka rocket, for ex-

ample, is aimed merely by aiming the launching tube.

On the other side of the fence is the Matador missile, actually an unmanned explosive-laden jet airplane. Because it can be guided, it is called a missile. In short, it is not the method of propulsion which makes a missile, but the fact that it can be guided after it has been fired, either all the way until it hits, or at least part of the way.

The rocket can accomplish things no other type of vehicle can do. It covers long distances in incredibly short periods of time; it ascends higher than anything else—a number of research rockets have actually left the atmosphere and reached empty space. For practical purposes, everything above 100 miles may be termed empty space, although, strictly speaking, space is never quite empty. There are always a few molecules of various gases and a few grains of cosmic dust around. Rockets can do these things just because they travel the larger portions of their trajectories on momentum.

To understand just what happens, we will look at the take-off of a large liquid-fuel rocket. Assume that inside this rocket there is a spring scale with a 1-pound weight bolted to it. While the rocket stands still on its firing platform, the scale reads 1 pound; but now the rocket motor has been ignited, the fuel pumps are in action and the rocket lifts off. Seen from the outside, it seems to lift rather slowly; during the first second of the take-off it does not even climb its own length. But the velocity of the rocket, at the end of that first second, is 32 feet per second. At the end of the next second the velocity is 64 feet per second. At the end of the third second the velocity is 96 feet per second. These are the same figures which would be true if the rocket were just falling (going down, of course), so that what takes place is actually a "reversed fall."

As the rocket begins its rise, the spring scale, which has the 1-pound weight bolted to it, will read 2 pounds. The reason is simple, once you understand the forces involved.

Under the influence of the earth's gravity alone, the scale reads 1 pound. But the acceleration of the rocket going up, due to the steady push of the burning rocket motor, is the same as the acceleration downward which gravity would produce. Therefore, the spring scale reads as if there were 2 pounds of weight resting on it. The force exerted by gravity is usually called  $g$ . In the rising rocket, the scale behaves as if the force were twice gravity, or  $2g$ , and it actually is, namely

$1g$  due to gravity and another force equal to  $1g$  due to the accelerated motion of the rocket. It is here that a distinction must be made. The spring scale reads  $2g$ , for reasons just explained. This is the "total acceleration" of the rocket. But with respect to the ground the rocket rises as if only  $1g$  were acting on it. The total acceleration is always  $1g$  larger than the "effective acceleration," no matter what the latter may be.

As the rocket continues to rise, moving faster and faster, the spring scale does not continue to read " $2g$ ." Slowly the pointer creeps higher and higher. Again the reason is simple. When the rocket was ready for take-off, with all fuel tanks filled to the top, the push of the rocket motor was sufficient to produce that acceleration of  $1g$  "effective," which has been explained. But the rocket motor keeps gulping large quantities of fuel all the time. Hence, while the thrust of the rocket motor remains the same, the weight of the rocket decreases rather fast as the fuel is burned. If the rocket with its fuel weighed 12 tons at take-off and the thrust of the rocket motor was 24 tons, the effective acceleration produced was  $1g$ . After some time the rocket will weigh only 6 tons (6 tons of fuel having been consumed) but the thrust of the motor is still 24 tons. Since less weight is now to be lifted, the acceleration has climbed to 4 effective  $g$  (with the spring scale inside reading 5 pounds) so that the speed increases four times as fast as it did in the beginning. It is the only known case of a vehicle where not only the speed increases because of acceleration, but the acceleration itself increases, too.

In a modern research rocket, the pointer on the dial of the spring scale would climb to 8 or 9  $g$  just before the fuel is giving out. The rocket, of course, is built to stand these accelerations and it is not much of a job to build the instruments inside the rocket's nose to stand these accelerations, too. Whether a pilot could stand them is another problem, for we do not design the pilot but have to accept him as designed by nature. However, pilots have been tested and the results will be discussed later.

## ARTIFICIAL SATELLITES

Research rockets have climbed so high they can be considered to have been in space. Since they were fired nearly vertically, they eventually fell back. Greatest height reached was 250 miles above sea level, and while it would be comparatively easy to get modern rockets to greater alti-

tudes, it has never been tried. We would not learn enough from a vertical shot, say 350 miles up, to justify the effort and expense.

The next step is not to shoot something farther into space, just to have it fall back at once, but to place something in space.



and to leave it there for considerable time. This is the object of Project Vanguard, the name of the project which seeks to fire about a dozen artificial satellites.

To visualize how such an artificial satellite can circle the earth purely on its momentum, it is best to employ a gradual approach by looking at rocket trajectories.

The German V-2 rocket covered a horizontal distance of 200 miles and ascended to about 60 miles altitude at the halfway point. This is a rather curved trajectory. If we had a rocket that could cover a horizontal distance of 600 miles, it might ascend to only 100 miles altitude at the halfway point. A still faster rocket might cover a horizontal distance of 2,000 miles but ascend only 200 miles at the halfway point. It can clearly be seen that the curves grow shallower and shallower the longer the range. At this point we must remember that the surface of the earth is curved too. Therefore there must be a velocity where the curve of the rocket's trajectory becomes as shallow as the curvature of the ground below. This rocket would not return to the ground, provided, of course, that it attains such a shallow trajectory outside the earth's atmosphere. Since the rocket, at that point, will travel on momentum only, there must be nothing which would reduce its momentum, such as air resistance. If nothing is in the way, the trajectory will become a closed curve. And becoming a closed curve, for example a circle, it ceases to be a trajectory. It now acquires a new name—the astronomical designation of orbit.

To stay in an orbit around the earth, a rocket must have a velocity of about  $4\frac{1}{2}$  miles per second. When it swings around the earth at that rate, traveling on momentum, the centrifugal force produced is just right to counterbalance the gravitational attraction of the earth.

Probably because the word "orbit" makes us think of the precise orbits of the various planets around the sun, the question is always asked just where there is an orbit around the earth. This is then followed by the question: "How do we know?" The answer to the first question is that the question itself is wrong. Orbits are not railroad tracks in a specific place. They can be anywhere, at any distance from the ground. And they can be circular or they can be elliptical in shape. A number of things can be stated about such orbits

in advance. One is that the rocket must move the faster the closer the orbit is to the ground; to stay in an orbit only 400 miles above sea level, it must be faster than it would have to be if it were to stay in an orbit 2,000 miles above sea level. Since the centrifugal force of the circling rocket must counterbalance the earth's gravity, we must go farther away from the earth, where the gravitational pull is weaker and less speed is needed. On the other hand, it takes more fuel to climb to an orbit farther away; therefore, an orbit nearer to earth, even though more speed is needed in the orbit, is more easily established.

Since there is a specific velocity for each orbit, there is also a specific "period of revolution" (the time required to go around the earth once) for every orbit. This period cannot be changed. For a circular orbit 1,075 miles from sea level, the period of revolution happens to be precisely two hours. It is impossible to make an artificial satellite go around the earth either in two hours and 15 minutes, or in one hour and 45 minutes and keep it at a distance of 1,075 miles. If it is at that distance it will go around the earth in two hours, traveling at the rate of 4.4 miles per second, or 264 miles a minute.

Here is a short table of a few possible orbits, all assumed to be precise circles.

Distance Above Sea Level (miles)	Period of Revolution (minutes)
346	96
470	105
1,075	120
3,200	210
4,000	240
7,700	420
22,300	1,440

The last one is given for curiosity's sake only since it would not be very useful. But one may add the figures for our moon, our natural satellite. Its distance is 240,000 miles and its orbit period is one month. And its orbital velocity is only  $6/10$ th of a mile per second!

The problem of producing an artificial satellite can now be stated in one sentence: The artificial satellite must be lifted above the atmosphere, and when it gets there it must travel at the rate of about 4.5 miles per second parallel to the ground.

## THE INTERNATIONAL GEOPHYSICAL YEAR

The 18 months from July 1957 to Dec. 1958 have been designated as the International Geophysical Year (I.G.Y.), an international effort devoted to exploration of

the planet Earth. One contribution of the United States to the I.G.Y. will be the firing of a number of artificial satellites into nearby space. They will be fired from

Patrick Air Force Base near Cape Canaveral in Florida. The rocket which will carry the artificial satellite into space has been named Vanguard and at least the first few of the artificial satellites will be spherical instrument packages 20 inches in diameter. A total of a dozen shots have been planned for the I.G.Y., but 16 Vanguard rockets have been ordered to have a few spares on hand in case of failure. As of Sept. 1, 1956, no date had been set for the first shot.

Vanguard will look much like a 70-foot rifle cartridge without any tail fins. It will be a 3-stage rocket, meaning it will consist of 3 rockets mounted on top of each other with the satellite proper on top of the third rocket. But the satellite will not be visible, as it will be protected during ascent through the atmosphere by a nose cone.

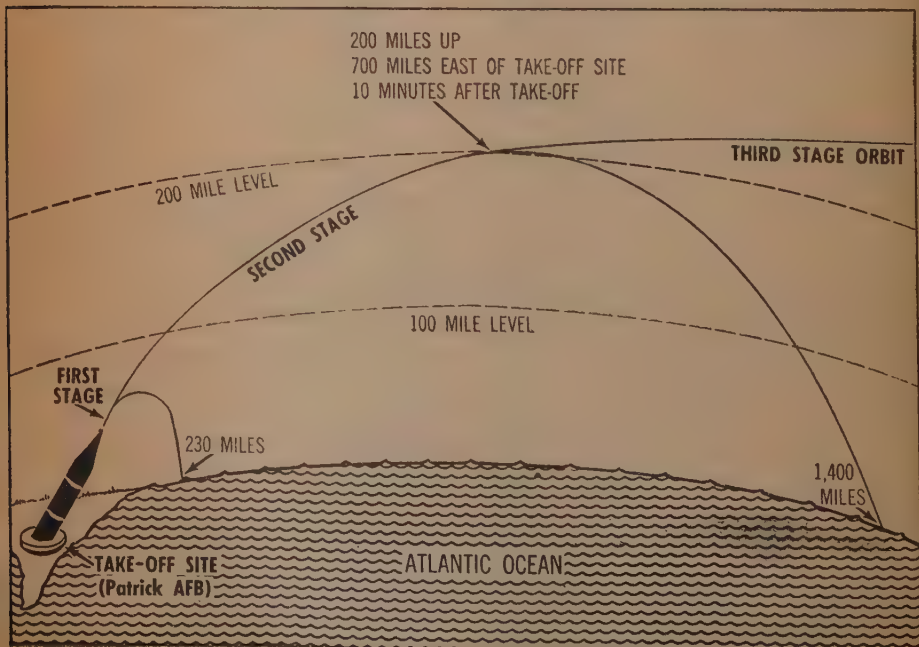
Total take-off weight of Vanguard will be around 11 tons, about a ton less than the take-off weight of the V-2. The first and largest stage of the 3-stage rocket—the stages are numbered in the order in which they will burn—will be a liquid-fuel rocket developed along the lines of the Viking rocket. The second stage will also be a liquid-fuel rocket, developed

along lines of the successful research rocket Aerobee. The third stage will be a solid-fuel rocket.

The planned take-off procedure is as follows: the 3-stage rocket will be lifted vertically by the first stage. After traveling vertically for a few miles, the whole 3-stage rocket will be tilted slowly in a southeasterly direction, with the trajectory passing over the Bahama Islands, where there are tracking stations for missiles. At the moment the fuel of the first stage gives out, the 3-stage rocket will be 36 miles above ground—or rather the ocean—and 25 miles from the take-off site measured horizontally. A second or two later, the vehicle is no longer a 3-stage rocket, and there are now two rockets in the air. The second stage, still carrying the third stage and the satellite on top of that, has begun to burn and has lifted itself out of the used-up first stage. The first stage continues to travel on momentum, of course, but since it is no longer actively powered, it quickly lags behind the second stage.

The first stage will rise to a maximum height of 65 miles before it begins to fall back. It will fall into the ocean some 230 miles from the take-off site. Meantime the

## TAKE-OFF DIAGRAM FOR ARTIFICIAL SATELLITE



second stage has exhausted its fuel; at the moment its motor stopped burning it was 140 miles above sea level and the same number of miles from the take-off site in horizontal distance. But the third stage will not immediately separate from the second stage. The second and third stages together will continue to rise on momentum, gaining altitude but losing some speed in the process. After the second stage has used up its fuel, the protective nose for the satellite will be shed; the rocket is now above 150 miles and there is no longer any air resistance worth mentioning so that the satellite can be exposed. About 10 minutes after take-off, the second and third stages together will be 700 miles from the take-off site and will have reached the highest point of the common trajectory, between 200 and 300 miles above sea level. At that moment the third stage will separate from the second stage. Another 10 minutes later the second stage will splash into the sea, 1,400-1,500 miles from the take-off site, and the third stage will be in an orbit around the earth.

At about that time the satellite will separate from the third stage, but this separation will be very gentle, being accomplished by the release of a tensed spring on which the satellite was mounted. That way we will actually get two satellites with every shot, because the third stage has the proper velocity to stay in the satellite orbit.

The two, the instrument-bearing satellite and the third stage, being a kind of uninstrumented satellite, will slowly drift apart but will follow the same orbit. It will take them between 90 and 100 minutes to complete one circuit of the earth. In the course of each circuit they will pass through two points (see diagram) which lie in a straight line with the center of the earth. The point farthest from the ground, called apogee, will be 1,200-1,500 miles above sea level. The point closest to the ground, called perigee, will be as high as the third stage was at the instant it burned its last ounce of fuel, let's say 200 miles up as an example. If there is any air resistance, however feeble, left at that height, the satellite will lose a small fraction of its momentum every time it passes through its perigee. The result of having lost some momentum is that next time on the way out the satellite won't go quite as far. If its maximum distance the first time round was 1,200 miles, the maximum distance the second time round might be only  $1,199\frac{3}{4}$  miles. In other words the farthest point, the apogee point, will slowly

come closer to the earth. The rate of its approach will enable us to determine the density of whatever is left of the atmosphere at the distance of the perigee point.

This gradual shrinking of the orbit is technically known as orbital decay and the elliptical orbit will gradually change into a circle at the height of the perigee point. But then another change takes place. Since now the satellite is on a circular orbit at the height of the perigee point, some resistance will be present all the time. This resistance, no matter how small at first, will change the circle into a tight spiral, and the satellite will come closer and closer. After some time it will have spiraled in far enough to reach denser air. Then it will burn up.

While the satellite is still in space, or rather for as long as its electric batteries will hold out, the instruments will report to the ground what they are built to report. They will count the number of cosmic rays the satellite encounters. They will report by an ingenious method on the number of dust grains which pit its surface. They will report on the earth's magnetic field. They will tell how hot the skin of the satellite becomes while in the sun and how quickly the skin cools off when the satellite enters the shadow of the earth.\*

As important as the data reported by the instruments are the data from observation of the satellite. The time it takes for the orbit to "decay," the time spent on the spiraling path, and the height at which the satellite finally burns up are all of the highest scientific and practical importance. They will help to solve a problem which has designers worried: the re-entry problem. The word refers to the re-entering of the atmosphere by a rocket or missile which has been in space. At the present state of knowledge, we can send something into space but we don't know how to get it back to the ground in one piece.

As explained previously, a rocket takes off rather slowly and gains speed. In gaining speed, it also gains altitude, climbing into more and more attenuated layers of the atmosphere. As it climbs, its skin, especially its nose, may be warmed a little by air friction, but not enough to cause any worry. However, when a rocket re-enters the atmosphere, the situation is reversed. It re-enters with a high velocity. The earth's gravitation helps to increase this velocity on the way down through

\* The artificial satellite will be visible to the naked eye when the sun shines on it, provided the sky is dark for the observer; i.e., before sunrise and after sunset. It will be rather hard to see, but it will be visible and the public will be advised via newspapers and radio when and where to look. The burn-up will be visible too if it should happen to take place in the night sky. Of course being able to watch a burn-up will be simply a case of good luck for the observer.



denser and denser layers of the atmosphere. Frictional heating increases at an unbelievable rate and the rocket will be vaporized before it reaches the ground.

This heating is the real core of the re-entry problem; the hopes are that by watching half a dozen artificial satellites, plus as many third stages, burn up, we will learn how to avoid it.

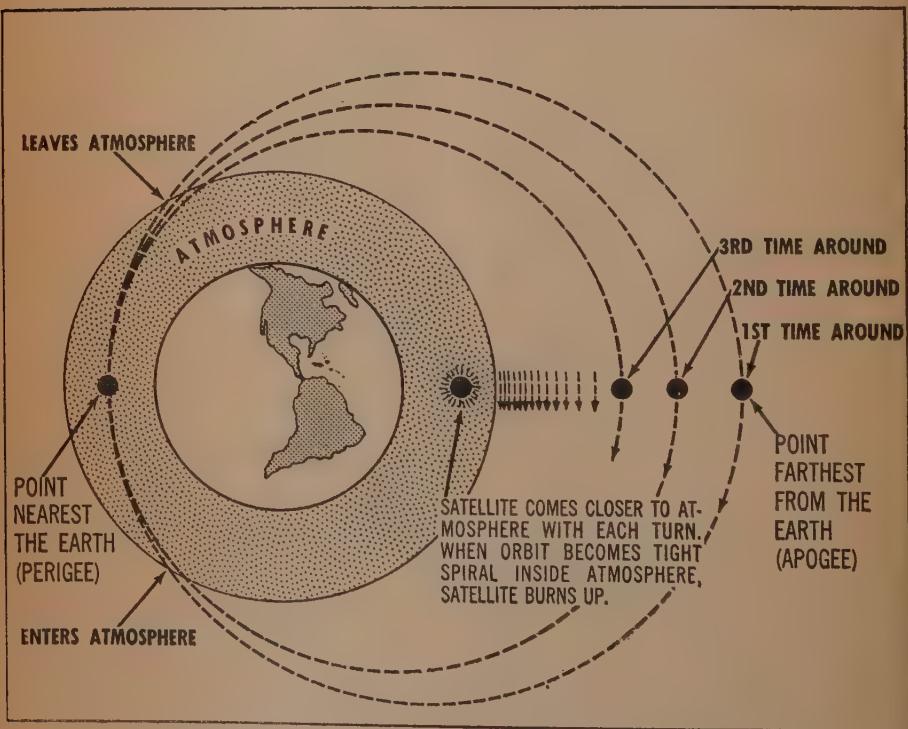
The re-entry problem applies to all rockets which have been outside the atmosphere, which means all intercontinental missiles with ranges of more than, say, 2500 miles. Without the solution of the re-entry problem, an intercontinental ballistic missile is without practical value.

The first series of satellite shots in 1957

or 1958 will no doubt be followed by others with larger and more elaborate artificial satellites. Then the next step will have to be taken—that of putting a man into a satellite orbit temporarily.

Such a rocket would also be a 3-stage rocket but much larger than Vanguard. Moreover, the third stage would be something like a small airplane, enabling the pilot to land after he has re-entered the atmosphere safely. Will the pilot be able to stand such a trip? Right now this question cannot be answered completely, but progress toward an answer has been made. We know the forces involved, and some experimentation has actually been done.

## ORBIT OF A TEMPORARY SATELLITE



## MAN IN SPACE

In a manned-rocket flight, the pilot will first experience the results of the steadily increasing acceleration, the period when the pound weight on the spring scale causes readings of two or three or even

six or seven pounds. This sounds offhand as if nobody could possibly stand it, but we already know that it can be done. Fortunately the effects of increasing acceleration can be simulated without even

leaving the ground. If a pilot is seated in the "cabin" of a sufficiently large centrifuge, his body can be fooled into feeling accelerations which are in reality centrifugal force. Large centrifuges—with all possible safeguards against mishaps—were constructed and volunteers took the tests.

Before the experiment began, scientists had to make up their minds which simulated velocity they wanted to reach. The scientists reasoned as follows: the fastest man will ever have to travel to get into space is 7 miles per second. This is the so-called escape velocity, the speed at which a rocket could escape from earth forever; if a rocket attained this velocity it could go all the way to the moon. It was easy to calculate that a rocket, traveling with an acceleration of 3 *g*, which would make you feel as if you weighed 3 times as much as you actually did, would need 9 minutes and 31 seconds to attain escape velocity. This, incidentally, is an especially striking example of the fact that a rocket does not need power all the way; after less than 10 minutes of burning, it would be fast enough to make the 4-day trip to the moon.

If the acceleration were higher than 3 *g*, one would, of course, reach escape velocity in a shorter time. The table of alternate choices for reaching escape velocity reads as follows:

#### FINAL VELOCITY: 7 MILES PER SECOND

Acceleration chosen:	Duration of acceleration:
3 <i>g</i>	9 min. 31 sec.
4 <i>g</i>	6 " 21 "
5 <i>g</i>	4 " 45 "
6 <i>g</i>	3 " 48 "
7 <i>g</i>	3 " 10 "
8 <i>g</i>	2 " 40 "
9 <i>g</i>	2 " 20 "
10 <i>g</i>	2 " 6 "

The obvious question was first: could anybody stand any of these accelerations for the necessary time? And secondly: which was easier on the pilot, 3 *g* for 9½ minutes or 7 *g* for 3 minutes and 10 seconds? Volunteers who went through the whole series could report that any one of the choices offered by the table could be endured, but that it was somewhat less strenuous to suffer 4 minutes at 6 *g* than 9½ minutes at 3 *g*.

By showing that a healthy person could stand the acceleration needed for escape velocity, it was also proved, of course, that one could stand the acceleration required for, say, a transatlantic flight, which would be just about half of the figures in the table. One volunteer, incidentally, withstood a full 17 *g* for a little more than a minute, a figure which any

doctor prior to these tests would have declared fatal without any hesitation.

So there is no need to worry about the health of a pilot for the period the power is on and the spring scale reads high. But how does the spring scale read when the power is off? It does not return to 1 pound, as one may think. It will read: zero. This statement always tends to be surprising at first hearing, but it is really simple. The rocket no longer accelerates, it climbs on momentum. The earth's gravitational pull also fails to register on the scale because the free-coasting rocket does not resist it in any way. Hence there is no force acting on rocket or pilot or scale. In the past this condition was called "free fall," with the word "free" supposed to suggest "free of all strain." But the second word, namely "fall," always suggested a downward movement which was wrong. Hence this term has been abandoned as being unintentionally misleading, and the term "zero-*g*" has come into use.

How will the pilot's body react to zero-*g*?

We don't know yet.

The main trouble is that there is no way of simulating zero-*g* on the ground; it has to be the real thing, and the real thing is hard to produce right now. The flight of an Aerobee rocket with two white mice and two monkeys aboard proved a few things. All the animals survived it without any detectable harm. We know (by a film taken with an automatic camera) that the mice were confused and presumably frightened while traveling under zero-*g*. The monkeys were strapped down on made-to-measure foam rubber couches so we don't know how they felt, except for the fact that an electrocardiogram taken does not look significantly different from two others, one taken before the flight and one taken afterwards.

For human beings the zero-*g* condition can be created by making a so-called parabolic flight. The performance is as follows: an airplane goes into a shallow power dive to build up as much speed as possible. Then the pilot pulls out of the dive and almost cuts off his engine. The idea is to travel through an arc on momentum only; but since this takes place in the atmosphere, a slight negative acceleration is caused by air resistance. To compensate for this effect, the engine should run with just enough power to overcome the air resistance. When this maneuver is properly performed, the pilot will experience zero-*g* until it is necessary to pull out of the arc he flies. With a jet trainer he may be able to experience half a minute of zero-*g*.

It has been done, but the reports are

somewhat contradictory. Some pilots didn't like the sensation at all; others said more or less, "I didn't mind." There may be individual differences, as we find when it comes to seasickness. Furthermore, it is quite possible that half a minute of zero-g is simply not enough to get used to the sensation and that the man who

doesn't like it for the first 20 seconds would no longer mind it after a few minutes. For the early period of manned-rocket travel, it will probably be best not to waste time trying to find out why some individuals respond poorly to zero-g and to look for a cure, but simply to select those who adapt easily to zero-g.

## DANGERS IN SPACE

In addition to strains produced by the flight itself, there are other dangers to people who venture above the atmosphere. The first of these is radiation from the sun. In round figures, sunlight should be about three times as intense at the top of the atmosphere as it is at the atmosphere's bottom. But fortunately none of this radiation can pass through the metal skin of the ship, so that special attention needs to be paid only to the windows which must absorb all the ultraviolet and a good portion of the visible radiation too.

The next danger is the so-called cosmic rays. Cosmic rays are not rays in the usual meaning of the word, but are actually the nuclei of atoms traveling at enormous speeds. Most of these nuclei are those of the hydrogen atom, the lightest and simplest of all atoms. Every once in a while a cosmic ray turns out to be the nucleus of a heavier atom. When such a high-speed atomic nucleus enters the atmosphere, it sooner or later collides with atoms which make up the atmosphere, thereby producing a number of "secondaries." The entering nucleus is logically called the "primary." The term "heavy primaries," which is often used, merely means that the primary was a heavier nucleus than a hydrogen nucleus.

To stop a primary, and especially a heavy primary plus all the secondaries it produces, would require shielding heavy enough to serve in an atomic power plant or as armor on a battleship. And just because of the secondaries which are produced when a primary collides with matter, a little protection is worse than none at all. As somebody once said (the authorship of this sentence is disputed), "It is like trying to protect yourself from bullets by hiding behind a few layers of window glass." Since protection is impossible, the only alternative is to find out whether a man could brave the cosmic rays he might encounter and survive without harm. The best available information indicates that this is actually possible for a limited

period, a few days or maybe even a few weeks. Scientists are hopeful that the satellite shots will furnish more and better information, but even now one day in space seems to be safe, as far as the cosmic rays are concerned.\*

The third danger awaiting man in space is the meteorites. When it comes to meteorites, nothing is as misleading as a visit to a museum which has a good meteorite collection, for example the Hayden Planetarium in New York. There you see meteorites which have been recovered from various places, weighing a ton or two, with some gigantic specimens weighing 8 and 10 and even 13 tons. It is easy to conclude from such a collection that space must be an exceedingly dangerous place, what with 5-ton boulders and 10-ton chunks of iron whizzing around at a rate estimated to be 40 miles per second.

These large meteorites obviously exist, since we have them in our museums, but to conclude that they are common is like believing you can't go for a Sunday's sail offshore without bumping into a whale, fighting off a giant octopus or two and holding assorted sharks at bay. The vast majority of all meteorites are what is called dust on the ground. Astronomers have succeeded in making estimates of the number of meteorites which strike the earth. A meteorite half an inch in diameter may seem ridiculously small when compared with the giants in the museum, but to astronomers this is a big one which would leave a trail in the sky and look about as bright as Venus if it fell at night. Well, the estimate says that about 28,000 meteorites of that size or larger strike the earth in 24 hours.

A meteorite 1/100th of an inch in diameter is, of course, a much more common variety than its half inch brother, and the figure for the number of these which strike the earth during any consecutive 24 hours is correspondingly larger. In the same period of time, 4,500 million meteorites 1/100th of an inch in

\* Some cosmic ray research was performed by lifting small animals like hamsters and guinea pigs in airtight cages to 100,000 feet with large plastic balloons and leaving them at these altitudes for many hours. So far nothing more drastic has happened than a few gray and white hairs in the pelts of the animals. The unpigmented hairs are ascribed to cosmic ray impacts, but just how they bleached the hairs is still unknown.



diameter burn up in the earth's atmosphere. Add to these, 3,000 million meteorites larger than 1/100th of an inch in diameter, which strike the earth daily, and you get a total of 7,500 million hits per day. These enormous figures do sound frightening but we must keep two things in mind: first, most of them are very tiny dust particles; second, the earth is a target nearly 8,000 miles in diameter. When the target is as small as an airplane, the number of hits is reduced proportionately.

For purposes of calculation it was assumed that the rocket has an exposed area of 1,000 square feet. For such a size the expected number of hits by a meteorite 1/100th of an inch in diameter is ridiculously small; the ship is likely to be struck by one every 20,400 hours! This means that 850 days will go by between hits. And the figure even includes all the meteorites larger than 1/100th of an inch. If you go down to particles of 1/100th of a millimeter in diameter—this is about the particle size of very fine silt—you can expect one hit every two hours.

## SPACE STATIONS—TEN YEARS AWAY?

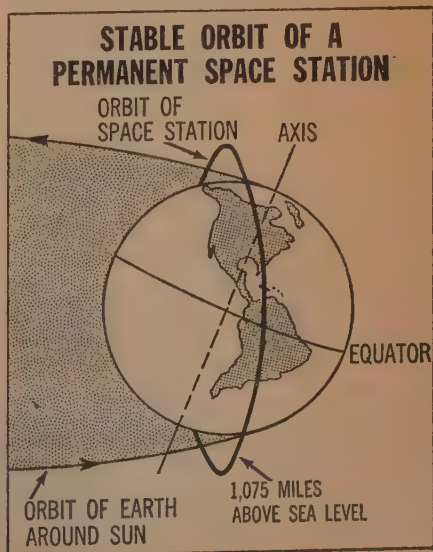
It can be seen that the picture of future space travel consists of much that is already known, interlarded with a few unknowns. Of course the re-entry problem has to be solved first. Then we have to know how the pilot will react to prolonged zero-*g* conditions. The cosmic rays are a comparatively minor question mark.

But if we have solved the re-entry problem and found a pilot who actually likes the zero-*g* condition, a ship can go into an orbit. Since it is piloted, the man does not have to wait through the whole period of the orbital decay; he can return at will, simply by firing his rocket motor in the direction of his movement. This would slow his ship very quickly. It would enter the atmosphere at a slant and the pilot would go through a long supersonic glide until he lost enough speed to land normally.

The next try could be to circle the earth a few times in a permanent orbit; a permanent orbit differs from the temporary orbits of the artificial satellites simply by being outside the atmosphere along its whole length. (It also tends to be more nearly circular than the elliptical temporary orbits, but at a greater distance from the ground.) When the time comes to break out of the permanent orbit, the procedure is the same as before: it is done by firing the rocket motor in the direction of the movement. But let us assume that

These figures show clearly that a hit from a large meteorite would be so rare that it can be discounted, but that hits of very fine dust particles have to be expected. If the outer skin of the rocket consisted of sheet steel  $\frac{1}{8}$  of an inch thick, it could stop every meteorite up to one millimeter (just about the thickness of a dime) in diameter. But there is a better way, first suggested by Prof. Fred L. Whipple of Harvard. If only a very thin aluminum sheet were placed between the meteorite and the ship's skin, the latter could be much thinner. For at impact velocities up to 40 miles per second, the particle would be vaporized just because it struck something. A portion of the outer shield, probably somewhat larger than the diameter of the dust particle, would disappear too. By perforating the outer skin, the so-called meteor bumper, the power of the impact would be broken so that the ship's skin proper would not be damaged at all. Naturally the meteor bumper would be no protection against a pebble-sized meteorite, but the real worry is the cosmic dust, which is stopped by the meteor bumper.

something has been jettisoned from the ship prior to this retardation maneuver. Whatever has been jettisoned had the proper speed for staying in the orbit. Since it is no longer connected with the ship, it is not subjected to the retardation.



Hence, while the ship returns to the ground, the jettisoned object remains in the permanent orbit. Forever.

This fundamental fact provides the basis for the idea of a space station. Space station also signifies an artificial satellite, but one which is manned. At present the procedure of putting a space station into the sky is visualized as a job with three distinct phases. First the station would be built on the ground and tested thoroughly. Then it would be taken apart to be transported piecemeal to the orbit chosen for it, probably the 2-hour orbit 1,075 miles above sea level. The sections could simply be left in space and, like the jettisoned object of our example, they would stay there.

Originally it was thought that only one type of rocketship would be used throughout the whole space-station program. This rocketship was supposed to carry up the space station piecemeal, then to bring the assembly crew (the same people who had disassembled it on the ground) and later on for the crew for the station, and finally to serve as a supply ship for the station, including the carrying of relief crews. To concentrate on one type of rocketship only seemed to be the most practical solution. But a recalculation of the whole problem from the point of view of fuel economy suggests that two types of ships would be better, the second type being an unmanned freight carrier. Of course it would simply be impossible to direct an unmanned freight carrier to a certain point of a certain orbit at a specific moment by remote control from the ground. But the problem changes radically if a manned ship is waiting in the orbit to take over control from the ground station as soon as the freight carrier has left the atmosphere.

The third phase of the job would be the reassembly of the station, performed by men wearing space suits designed especially for this purpose. Prototypes of such space suits are already in existence.

The space station is not in the immediate future like the artificial satellites. At best ten years will go by between the first satellite shot and the assembly of the space station. But it will be something well worth having. The main concern of the space station will be the earth. Just as one can get a better view of a land-

scape from an airplane than from horseback, from the space station one could get an excellent view of the earth as a whole and, with proper optical instruments, of fine detail when necessary. At any one moment, nearly half the earth would be visible to the space station; and within a 24-hour period, every point could be inspected at least once while it was daylight for that point.

No iceberg could approach shipping lanes without being spotted. No hurricane could approach the shore as a surprise. No large-scale movement of air masses could take place unnoticed. Every ship at sea could be watched, if necessary, and the position of airliners could be checked on request. Secret fleet movements or troop concentrations would be virtually impossible; the space station could engage in an open-sky inspection, which is faster and more thorough than anything that could be accomplished in any other manner.

Naturally the space station, being outside the annoying haze of the earth's atmosphere, would be an astronomical observatory of almost infinite capacity. Most of the astronomical puzzles of today could be solved within a short time with a photographic telescope operated from the space station. (It is only in the nature of things that the space station would discover a new set of astronomical puzzles which it could not solve.)

Finally, the space station would be an entirely novel research laboratory, a laboratory where the sun would be willing to heat any substance to any degree of heat without any charge at all, where a substance could be cooled off to very nearly absolute zero simply by placing it in the shadow of the space station. It would be a laboratory where cubic miles of vacuum would be accessible to anybody interested in vacuum techniques. It would be a laboratory where the growth of crystals and living cells at zero-*g* could be studied. It would probably pay for itself within a few years.

The space station would also be the base of operations for the assembly of the deep space ships which will come later. It will be humanity's doorway to the planets.

And it may be accomplished a decade after the I.G.Y. satellite shots.

A special subcommittee of the International Council of Scientific Unions is in charge of arrangements for the International Geophysical Year, in which many nations will participate. A U. S. committee, appointed by the National Academy of Sciences, is in charge of the U. S. satellite program, a civilian project financed by the government. The job of firing the satellite carrier is the responsibility of the Defense Department.

# THE ECONOMIES OF THE UNITED STATES AND RUSSIA

*Analysis and interpretation by*

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*We believe this is the first time comparative statistics on the American and Russian economies have been presented in a book for the general public.*

**T**HE END of World War II brought about the emergence of the United States and Russia as the two great dominating forces in the world.

The hope that the collaboration and understanding dictated by the threat of a common enemy during the war would continue in peacetime collapsed; and these two great countries, who had fought together, now faced each other as contending forces for leadership and survival.

They became the chief exponents of two different ideologies—Russia for communism and a monolithic state, the United States for a free-enterprise democracy. The competition assumed various directions in propaganda, diplomacy, alliances and military and productive strength. At this point the battle is raging

on all fields. Russia is no longer a backward, agricultural economy, but a modern, dynamic and resourceful nation. The survival of either ideology—and, indeed, of our modern world—may be determined by the outcome of this struggle.

What are the promises or threats? How can they be measured? Without attempting prophecy, we will endeavor to present a comparison of the equipment both nations possess. In our modern, complex civilization the power of a nation is determined by its population, resources, education, technological advances, etc. Its ability to hold the loyalty of its people, in real measure, is based upon the devices it employs for raising their standards of living. To this extent, the progress of the United States and Russia, in recent years, is worth analyzing.

## THE UNITED STATES AND RUSSIA

Industrial Russia is not the creation of the Communist party. The growth of a country is a complex of many factors among which are to be found a sizeable and working population, the presence of basic raw materials (including foodstuffs and fibers), interior transportation, technical education, and the capacities to save and attract foreign capital in order to speed the processes of capital formation. And what are the goals, in economic terms? These, certainly, are the important ones: the lessening of human toil, by the increasing of productivity through the employment of mechanization; and the

improvement of the standards of living of the whole population.

Interestingly enough, about 100 years ago, all these processes were at work in the United States and Russia; and industrialization may be said to have begun in both countries. In the 40 years from 1860-1900, both countries impressively stepped up the production of basic materials like coal, pig iron, iron and steel. With the turn of the twentieth century, both began to produce petroleum and hydroelectric power. To this extent, both economies were similar: they had vast agricultural plants producing surpluses (the United States:



cereals and cotton; Russia: cereals) and these, entering foreign trade, created favorable trade balances so that foreign capital for investment could be attracted. In both countries these investments from other lands helped in the building of the trunk railroads and other industries. Our figures, starting with 1900, show that both countries already had begun to industrialize.

In consequence, that Russia today is an industrial nation should be no cause for surprise. It has great quantities of raw materials, a large labor force, and the ability to save, thus making possible the capital creation out of which the tools of production come. Also, the great stepping up of technical education in recent years is producing a large staff of trained engineering managerial personnel. But, today, in Russia, such capital creation and skills are being employed for the advancing of the heavy and also the defense industries. As our tables show, when it comes to consumption—pushing up the standards of living of its own people—the Russian economy is far behind that of the United States.

What a well-known economist, Frederick C. Mills, has said about the United States, is in part brought out by our tables. "Thanks to modern technology [i.e., advances in productivity] we have had to employ only a relatively small part of our resources to maintain and enlarge our productive plant. We have used most of our vast new powers to ease the lot of citizens at large through gains in leisure,

and to improve it through diversified consumption patterns. . . . In major degree, the benefits of industrial progress in the United States in this half century [1900–1950] have served to lighten toll for producers and elevate living standards for consumers." Professor Mills' figures show that in this half century, American productivity—output per man for each hour of labor—increased 181 per cent; and that per capita consumer expenditures in constant dollars—a rough measure of living standards—rose 143 per cent. From 1929 to 1955, per capita consumer expenditures (in 1955 dollars) rose from \$1,012 to \$1,527—an increase of 50 per cent!

Unfortunately, comparable figures on productivity and consumer outlays for Russia are not available. We do not know how well off the Russian consumer is today—in terms of real disposable income—as compared with the Russian consumer of 1913 and 1928, when the First Five Year Plan was inaugurated. We cannot measure, in exact statistical terms, over the same period of time, his position as compared with the American consumer. Yet we are not wanting for clues, as our tables for the production of motor cars, radio and television sets, refrigerators and washing machines show. Most revealing is the table comparing the working-time necessary for a New York worker and a Moscow worker to purchase characteristic articles of everyday living. (See table below.)

The tables that follow, therefore, have to do largely with production and not consumption. They do not include those

### Working Time Required to Buy Selected Commodities, Moscow and New York City, 1953

Item	Unit	Approximate working time		Moscow working time as multiple of N. Y. C.
		Moscow <sup>1</sup>	N. Y. C. <sup>2</sup>	
Foods:				
Rye bread.....	1 lb.	12 mins.	6 mins. <sup>3</sup>	2
Potatoes.....	1 lb.	7 mins.	2 mins.	3.5
Beef, average quality.....	1 lb.	117 mins.	24 mins.	5
Butter, second quality.....	1 lb.	248 mins.	27 mins. <sup>4</sup>	9
Sugar.....	1 lb.	84 mins.	3.3 mins.	25
Milk.....	1 qt.	42 mins.	7 mins.	6
Eggs.....	1 doz.	168 mins.	25 mins.	7
Tea.....	1 oz.	54 mins.	2.5 mins.	21
Men's wear:				
Shirt, printed cotton.....	one	22 hours	1 hour	22
Suit, wool, single-breasted.....	one	47 days	3 days	16
Overcoat, wool.....	one	42 days	3 days	14
Shoes, black calf.....	pair	13 days	1 day	13
Women's wear:				
Dress, cotton.....	one	20 hours	2 hours	10
Shoes, leather.....	pair	8 days	6 hours	11
Other:				
Radio, 6-tube, table-model.....	one	32 days	14 hours	18
Vodka.....	1/5 qt.	8 hours	2.5 hours	3
Soap, toilet.....	3½ ozs.	30 mins.	3 mins.	10

<sup>1</sup> April 1, 1953. <sup>2</sup> March 15, 1953. <sup>3</sup> White bread. <sup>4</sup> First quality.

aggregative data (gross national product and expenditures; national income and its distribution) by which statisticians measure the performance of an economy as a whole. To this extent, the Russian figures are not as complete or as revealing as they might be. The basic production figures for the United States and Russia are here, on

the other hand. And we are in a position to compare the two countries as regards those materials out of which ultimately standards of efficiency could be created, but which presently are absorbed to a great extent in both countries (more markedly in Russia) in capital formation and military defense.

## POPULATION

At the turn of the century, Russia started out with a population almost twice that of the United States. In 1956, it is only 16 per cent greater—that is, the American population has been growing more rapidly than the Russian. From 1900 to 1956, the Russian population increased 50.6 per cent, while the American increased 120.1 per cent. But in recent years, this difference has been largely eliminated, as the population growth from 1950 on for the two countries shows.

The urban population of the United States, relatively and absolutely, has always been greater than Russia's. In recent years—since the First Five Year Plan of 1928—Russia's urban population has been growing. Relatively, it more than doubled during 1928–56, while the American urban population increased only one-sixth. (See p. 84.)

It would be assumed that with a greater nonagricultural population from which to draw, America's present industrial supremacy is easy to explain. This is not the case, for in 1955, both countries had about the same number of persons engaged in productive activity (other than agriculture); 49.4 millions in the United States, 48.4 millions in Russia. The difference also is to be found in the distribution of these workers. In the table on p. 84, it will be observed how much greater are the numbers of American workers in trade, finance and service activities. American superiority at the present time, among other factors, is to be found in the greater productivity of American labor and therefore the ability to divert more workers into the service industries.

## PRODUCTION

Despite the much greater number of persons in agriculture and a larger area of land under cultivation, Russian agricultural production is below the American; nor has Russian agricultural progress kept pace with Russian industrial advances. In terms of actual harvest yield, grain production in Russia almost doubled from 1900 to 1955 (although this was partly affected by boundary changes). In the United States, the increase was about 35 per cent. The American yield continues

greater. To grains in the American diet one must also add fruits and vegetables, milk, butter and cheese and meat products.

The figures for livestock herds are significant. Russia needs large numbers of horses (for work animals) and large numbers of sheep and goats (for fibers). The number of cattle (beef and dairy) in Russia currently is what it was in 1928; the United States since then has shown an

(Continued on p. 85).

**Livestock Herds**  
(in millions)

Year	Horses		Cattle		Hogs		Sheep and goats	
	Russia	U. S.	Russia	U. S.	Russia	U. S.	Russia	U. S.*
1901.....	28.8	18.0	46.3	62.6	15.6	50.7	84.0	46.1
1913.....	35.5	21.0	60.3	56.6	20.3	53.7	112.0	40.5
1928.....	36.1	14.8	66.8	57.3	27.7	61.9	114.6	40.7
1937.....	16.2	11.3	50.9	66.1	25.7	43.1	66.6	45.3
1940.....	21.0	10.4	54.5	68.3	27.5	61.2	91.6	46.3
1945.....	10.5	8.7	47.6	85.6	10.6	59.4	70.0	39.6
1950.....	13.7	5.5	57.1	78.0	24.4	58.9	99.0	26.2
1955.....	n.a.	3.1	67.1	96.6	52.2	50.5	142.6	27.1

\* Sheep only. n.a.—not available.

## POPULATION AND PRODUCTION

(Additional Tables—page 85)

### Population

Year	Total population (in millions)		Urban population as % of total	
	Russia	U. S.	Russia	U. S.
1900.....	132.9 <sup>2</sup>	76.0	...	39.7
1913.....	170.9 <sup>2</sup>	95.2 <sup>1</sup>	17.7 <sup>2</sup>	46.1 <sup>1</sup>
1928.....	154.3 <sup>2</sup>	120.5 <sup>1</sup>	17.9	55.9 <sup>1</sup>
1940.....	196.7 <sup>1,4</sup>	131.7	31.6	56.5
1945.....	170.1 <sup>1,5</sup>	139.9	...	58.2 <sup>1</sup>
1950.....	184.2 <sup>1,5</sup>	151.1	37.6	59.0
1955.....	199.4 <sup>1,5</sup>	164.4 <sup>1</sup>	43.3	64.0 <sup>1</sup>
1956.....	200.2 <sup>5</sup>	167.3 <sup>1</sup>	43.4	64.1 <sup>1</sup>

<sup>1</sup> Estimated. <sup>2</sup> 1913 boundaries. <sup>3</sup> Pre-1939 boundaries. <sup>4</sup> 1940 boundaries. <sup>5</sup> 1945 boundaries.

### Workers in Nonagricultural Establishments, 1955\*

(in millions)

	Russia	U. S.
Manufacturing.....	17.4	16.6
Construction.....	3.2	2.5
Transportation and public utilities...	5.7	4.1
Trade.....	2.9	10.7
Finance.....	0.3	2.2
Services.....	...	5.7
Government.....	1.4	6.9

\* Note: These figures are not exactly comparable. The Russian figures include "Others, 3.7 millions" and "2.6 millions for Health Services."

### Production of Motor Vehicles\*

(in thousands)

Year	Russia	U. S.†	Year	Russia	U. S.†
1900.....	none	4.0	1940.....	145.4	4,472.0
1913.....	none	187.0†	1945.....	104.6	725.0
1928.....	0.7	4,359.0	1950.....	362.9	8,003.0
1937.....	200.0	4,820.0	1955.....	445.3	9,169.0

\* Passenger cars, trucks and busses. † Factory sales. ‡ 1910.

### Production of Copper Smelter Products\*

(in thousands of metric tons)

Year	Russia	U. S.	Year	Russia	U. S.
1900.....	8.5	274.9	1940.....	161.0	824.7
1913.....	31.1	555.4	1945.....	148.0	710.1
1928.....	35.5	828.2	1950.....	255.0	826.8
1937.....	97.5	757.2	1955.....	n.a.	904.9

\* From domestic ore only. n.a.—not available.

## Production of Pig Iron and Crude Steel

(in millions of metric tons)

Year	Pig iron		Steel ingots and castings	
	Russia	U. S.	Russia	U. S.
1900.....	2.9	14.0	2.7	10.4
1913.....	4.2	31.5	4.2	31.8
1928.....	3.3	38.8	4.3	52.4
1937.....	14.5	36.7	17.7	51.4
1940.....	14.9	41.9	18.3	60.8
1945.....	8.8	48.3	12.3	72.3
1950.....	19.2	58.6	27.3	87.8
1955.....	33.3	70.5	45.3	106.2

### Production of Coal and Crude Petroleum

(in millions of metric tons)

Year	Coal*		Crude petroleum	
	Russia	U. S.	Russia	U. S.
1900.....	16.4	247.7	10.3	8.6
1913.....	29.1	551.7	9.2	33.6
1928.....	35.5	522.6	11.6	121.9
1937.....	128.0	451.2	28.5	173.5
1940.....	165.9	464.7	31.1	183.1
1945.....	149.3	573.8	19.4	231.9
1950.....	261.1	517.4	37.9	267.0
1955.....	391.0	448.5	70.8	336.1

\* Including lignite.

### Production of Cement

(in millions of metric tons)

Year	Russia	U. S.*	Year	Russia	U. S.*
1900.....	n.a.	2.9	1940.....	5.68	22.2
1913.....	1.52	13.1	1945.....	1.85	12.9
1928.....	1.85	27.5†	1950.....	10.19	38.5
1937.....	5.45	20.1	1955.....	22.48	50.6

\* Portland cement only. † 1930.

## Generating Capacity and Production of Electric Power

Year	Generating capacity (in millions of kilowatts)		Electric power production (in billions of kilowatt-hours)	
	Russia	U. S.	Russia	U. S.
1900.....	0.08	3.0 <sup>1</sup>	n.a.	6.0 <sup>1</sup>
1913.....	1.1	11.0 <sup>2</sup>	1.9	24.8 <sup>2</sup>
1928.....	1.9	34.6 <sup>3</sup>	5.0	108.1
1937.....	8.1	44.4	36.2	146.5
1940.....	11.3	51.0	48.3	179.9
1945.....	10.7 <sup>4</sup>	62.9	43.3	271.2
1950.....	24.0 <sup>4</sup>	82.8	91.2	388.7
1955.....	n.a.	130.4	170.1	624.9

<sup>1</sup> 1902. <sup>2</sup> 1912. <sup>3</sup> 1927. n.a.—not available.



### Railroad Turnover and Length of Railroad Network

Year	Freight carried (in millions of ton-kilometers)		Length of railroad network (in thousands of kilometers)	
	Russia	U. S.	Russia	U. S.
1900.....	63.9	206.7	53.2	310.0
1913.....	65.7	440.5	58.5	408.1
1928.....	93.4	636.7	76.9	419.5
1937.....	354.8	529.7	84.9	403.4
1940.....	415.0	548.0	106.1 <sup>1</sup>	395.6
1945.....	314.0	998.9	112.9 <sup>1</sup>	385.5
1950.....	602.3	863.7	116.9 <sup>1</sup>	381.3
1955.....	970.9	910.4	120.7 <sup>1</sup>	354.7 <sup>2</sup>

<sup>1</sup> Includes 16,600 kilometers in areas annexed 1939-40.  
<sup>2</sup> Estimated.

increase of 70 per cent. Russian herds declined up to 1944 as a result of forced collectivization, following 1930, and the effects of war. Since 1945, increases in herds have been very great.

While in none of the sectors of heavy-goods production has Russia caught up to the United States (in iron and steel it still produces less than one-half of American output), its growth since 1928 has been phenomenal. From 1900 to 1928, Russian pig iron and steel ingot production had less than doubled, while in the United States the increase in the first was three-fold and the second five-fold. But from 1928 to 1955, Russian pig iron production increased seven-fold (United States less than doubled) and Russian heavy steel increased ten-fold (United States less than doubled). The performances in cement and copper were somewhat similar.

In coal and crude petroleum, Russia also has made striking advances. Starting very far behind the United States in 1900 and having made no very real progress by

### Agricultural Production (in millions of metric tons)

Year	Grain <sup>1</sup>			Unginned cotton	
	Russia		U. S. actual harvest <sup>4</sup>	Russia	U. S.
	Official figure given <sup>2</sup>	Estimated actual harvest			
1900.....	57.3	57.3	102.8	0.08 <sup>5</sup>	2.15
1913.....	80.1	80.1	102.2	0.74	3.00
1928.....	73.3	73.3	126.7	0.82	3.07
1937.....	120.3	96.0 <sup>3</sup>	120.3	2.60	4.01
1940.....	119.0	89.0 <sup>3</sup>	117.0	2.40	2.66
1945.....	66.5	50.0 <sup>3</sup>	139.1	1.10	1.91
1950.....	124.5	80.0 <sup>3</sup>	144.0	3.56	2.15
1955.....	n.a.	103.0 <sup>3</sup>	131.8	3.88	2.80

<sup>1</sup> Includes wheat, rye, barley, oats, corn, buckwheat and dried legumes. <sup>2</sup> Estimates of crops regardless of harvest yield. These are inaccurate, inflated figures. <sup>3</sup> Independent estimates of actual yield. <sup>4</sup> Some individual crop figures included in total are averages for several years. <sup>5</sup> 1904. n.a.—not available.

1928, Russian coal production by 1955 was almost as great as America's. (During this period, of course, the United States developed other fuels—petroleum and natural gas being the most important.) In the case of petroleum, American production has more than tripled during 1928-55, and the United States still produces about five times the amount Russia does.

The same story is to be told as regards electric power production. Up to 1928, Russian progress had been small while America's growth was great. By 1955, Russia was one of the great electrical users of the world, increasing its capacity twelve-fold. It was still far behind the United States, for America was using almost four times as much electricity as Russia was in 1955. (See p. 84 for tables.)

The American railroad network (1928-55) was contracting and the Russian was

### Basic Production, Russia, U. S., China, Western and Eastern Europe, 1953 (in millions of metric tons; except electricity, in billions of kwh)

Item	Western Europe	Eastern Europe <sup>1</sup>	Russia	China (mainland)	U. S.	World
Electricity.....	308.8	59.3	133.0	9.1	514.2	1,245.8
Pig iron <sup>2</sup> .....	47.0	7.4	27.5	1.9	70.0	165.8
Crude steel.....	72.4	12.5	38.0	1.6	101.3	232.3
Rolled steel.....	47.9	8.7	29.5	1.0	.....	.....
Coal.....	587.3 <sup>3</sup>	360.3 <sup>3</sup>	320.0 <sup>3</sup>	57.2	440.3 <sup>3</sup>	1,896.0
Cement.....	58.0	11.7	16.2	4.0	45.0	175.3

<sup>1</sup> Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Rumania. <sup>2</sup> Includes ferroalloys. <sup>3</sup> Including lignite.

expanding. From 1928 to 1955, the Russian rail system almost doubled in length. America's decline is due to a number of factors: increasing use of truck transport and better roadbeds and greater efficiency of locomotives, among others. Therefore, Russian rails are carrying much more freight and in fact as much freight as are the American rails; but with more miles of line in 1928 than in 1955, the American railroads carried 40 per cent more freight in the later year than the earlier.

The comparison of western Europe (largely America's allies) with Russia and its eastern European satellites is illuminating. In coal, Russia and eastern Europe already are ahead of western Europe. In electricity, pig iron, heavy and finished steel, and cement, the European Communist bloc is not far behind. China, on the other hand, has yet far to go before industrialization on a significant scale begins to take place. (See table, page 85.)

#### Index to Production and Population Tables

Agriculture .....	85
Cement .....	84
Coal, Petroleum .....	84
Consumer Durables .....	86
Copper .....	84
Electric Power .....	84
Livestock .....	83

Motor Vehicles .....	84
Non-Agricultural Workers .....	84
Pig Iron, Crude Steel .....	84
Population .....	84
Railroads .....	85
The East and West .....	85
Working Time Compared .....	82

## CONSUMPTION

The Russian statistics for consumer durable goods are incomplete but enough are available to give some clues about standards of living. Despite feats of production, notably since 1928 and 1945, articles for consumer use still rank low in Russian schedules. As regards motor vehicles (cars, as well as trucks and buses), Russian production is far behind the American. It is true that in 1955, the Russians were producing 445,200 motor vehicles, but Americans were manufacturing twenty times as many.

In radios, Russian production has been catching up to the American; but this has been due to the fact that Americans have been turning to television. The great disparity between the two countries here—as it exists in the cases of refrigerators and washing machines—points up the startling contrasts in living standards in the two countries.

This difference is driven home by the table on p. 82 showing the working time necessary in order to buy common commodities in the cities of Moscow and New York. In 1953—and there is no assumption that radical changes have occurred since—it took a New York worker 7 minutes to earn a quart of milk, while it took his Russian counterpart 42 minutes to earn the same article, or six times as long. In the case of clothes, the differences were even greater. (This comparison, of course, also assumes comparable quality). The last column in the table tells how many times longer it took the Moscow worker to earn the item than was required by the New York worker. There was no question of the infinitely higher standards of living of the American worker as compared with those of the Russian.

(Continued on p. 87)

### Production of Selected Consumer Durable Goods

(in thousands)

Year	Radio sets		Television sets		Refrigerators		Washing machines	
	Russia	U. S.	Russia	U. S.	Russia	U. S.	Russia	U. S.
1937.....	200	8,065	...	....	none	2,310	none	1,465
1940.....	161	11,800	...	....	3.5	2,600	none	1,892*
1950.....	1,050	9,850	30	7,464	1.2	6,200	0.3	4,273
1954.....	2,890	6,276	250	7,347	94.0	3,600	45.7	3,610
1955.....	3,530	7,800	490	7,905	151.4	4,025	87.0	4,387

\* 1941.

## School and Health Facilities in U. S. and Russia Compared

### EDUCATION AND HEALTH

Every evidence points to an enormous increase in educational programs in Russia. Since 1928, enrollment in primary and secondary schools has more than doubled and the number of teachers has increased four-fold. The Russian program is usually a ten-year program and the American is a twelve-year one.

This broader base in the United States is reflected in the attendance in institutions of higher learning. Since 1928, Russia showed great increases; but it still lags far behind the United States. Roughly, American enrollment is at least twice that (or possibly greater) in institutions of higher learning. It should be noted that figures cannot be regarded as exactly comparable. This is reflected in "graduations," from institutions of higher learning, where those in Russia seem almost as high as those in America. Among the Russian "institutions of higher learning" are the polytechnical schools (combination of vocational and pre-engineering programs), whose degrees Americans would not regard as comparable to the undergraduate degrees of American schools of engineering.

Therefore, it would appear that in 1953 Russia had as many persons trained for the professions as did the United States (engineering, medicine, dentistry, agriculture, teaching). If we assume two levels of instruction—the polytechnics and the universities—we are able to see that as far as theoretical training, at any rate, goes, the

number of American university graduates probably is somewhat higher.

It also will be observed that in Russia higher education is usually associated with professional education; which accounts for the much smaller number of graduates in "socio-economic science" (American equivalent: School of Commerce or Business) and "other" (American equivalent: liberal-arts studies). Whatever the differences between the practices of the two countries, there can be no doubt that the number of technically trained (and, perhaps too, theoretically trained) persons in Russia is growing very rapidly. Certainly, as far as new engineers being turned out is concerned, Russia is competing very effectively with the United States. The decline in mathematics and

#### Illiteracy

(Illiterates as per cent of population)

Year	% of total population	
	Russia <sup>1</sup>	U. S. <sup>2</sup>
1897.....	76.0	10.9 <sup>3</sup>
1926.....	48.9	4.3 <sup>4</sup>
1939.....	18.8	4.2 <sup>5</sup>

<sup>1</sup> Population 9 years of age and over. <sup>2</sup> Population 14 years of age and over. <sup>3</sup> 1900. <sup>4</sup> 1930. <sup>5</sup> 1940; figure for 1952 was 2.6%.

### Institutions of Higher Education: Enrollment and Graduations (in thousands)

Year	Enrollment						Graduations	
	Resident students		Extension students (part-time)		Total enrollment			
	Russia	U. S.	Russia	U. S.	Russia	U. S.	Russia <sup>1</sup>	U. S.
1900.....	29.0 <sup>2</sup>	237.6	....	....	29.0 <sup>2</sup>	237.6	n.a.	27.4
1914.....	124.6	403.6	....	....	124.6	403.6	n.a.	37.2 <sup>3</sup>
1928.....	166.8	1,054.0	n.a.	360.2	n.a.	1,414.2	28.7	122.5 <sup>4</sup>
1937.....	548.5	1,350.9	n.a.	295.3	n.a.	1,646.2	94.9	n.a.
1940.....	585.0	1,494.2	227.0	292.2	812.0	1,786.4	102.2	185.9
1945.....	539.2	1,155.2 <sup>5</sup>	165.0	515.6 <sup>5</sup>	704.2	1,670.8 <sup>5</sup>	50.2	203.3 <sup>6</sup>
1950.....	845.0	2,659.0	402.0	848.7	1,247.0	3,507.7	173.0	432.0
1954.....	1,146.0	n.a.	584.0	n.a.	1,730.0	2,250.7	230.0	292.8

<sup>1</sup> Graduates of extension courses are not included except for 1950 and 1954. Graduates of Communist Party Schools are excluded throughout. <sup>2</sup> 1896. <sup>3</sup> 1910. <sup>4</sup> 1929. <sup>5</sup> 1946. <sup>6</sup> 1944. n.a.—not available.



### Primary and Secondary Schools: Enrollment and Teachers

Year	Total enrollment (in thousands)		Teachers	
	Russia	U. S.	Russia	U. S.
1900.....	4,892.0 <sup>1</sup>	16,961.0	n.a.	423,000 <sup>2</sup>
1914.....	7,800.0	19,644.0 <sup>3</sup>	231,000	523,000 <sup>2</sup>
1928.....	12,068.2	28,522.0 <sup>4</sup>	365,100	973,741 <sup>4</sup>
1937.....	29,562.0	n.a.	913,500	n.a.
1940.....	35,528.0	28,230.0	1,237,000	981,286
1945.....	25,800.0	25,923.0 <sup>5</sup>	1,194,000	935,765 <sup>5</sup>
1950.....	34,752.0	28,629.0	1,475,000	1,045,225
1955.....	30,070.0	30,574.0	1,733,000	1,138,922

<sup>1</sup> Estimated. <sup>2</sup> Public only. <sup>3</sup> 1910. <sup>4</sup> 1929. <sup>5</sup> 1944.  
n.a.—not available.

science teaching in the United States secondary schools, in part, has to do with this. We have not yet overcome the feeling that engineers suffer unemployment quickly in recession—the experiences of the 1930s. But engineering education in the United States is being stepped up.

As regards hospital beds and physicians, the same remarks are in order. Since 1928, the increase in medical services in Russia has been very great. How comparable the figures are with the United States is difficult to say; but even if allowance is made for all sorts of differences in the two countries, the Russian accomplishment is impressive.

### Number of Persons with a College Degree, Russia and U. S., 1953

Field of study	Number of persons*	
	Russia	U. S.
Engineering.....	500,000	530,000
Medicine.....	280,000	195,000
Dentistry.....	20,000	90,000
Agriculture.....	170,000	150,000
Teaching.....	750,000	1,000,000
Socio-economic science.....	100,000	1,000,000
Other.....	180,000	2,835,000
Total.....	2,000,000	5,800,000

\* Persons with a college or first professional degree.

### Medical Care

Year	No. of hospital beds (in thousands)		No. of physicians	
	Russia	U. S.	Russia	U. S.
1900.....	n.a.	421.1 <sup>1</sup>	n.a.	119,749
1913.....	175.5	532.5 <sup>2</sup>	19,785	142,332 <sup>3</sup>
1928.....	246.8	892.9	63,162	152,503 <sup>3</sup>
1937.....	618.1	1,124.5	135,567	169,628 <sup>4</sup>
1940.....	791.0	1,226.2	130,400	175,382
1945.....	745.2	1,738.9	n.a.	n.a.
1950.....	1,011.0	1,456.9	228,200	204,359
1953.....	n.a.	1,573.0	280,000	218,522

<sup>1</sup> 1909. <sup>2</sup> 1914. <sup>3</sup> 1929. <sup>4</sup> 1938. n.a.—not available.

## FOREIGN TRADE

(Foreign trade pages will be found on following page)

Foreign trade continues to play a significant role in the American economy; the export gap (difference between exports and imports) also continues to widen. In part this has been due to the mutual-aid program adopted after the end of World War II; but it must not be forgotten that invisible items in the balance of payments permit foreigners to pay for American goods (shipping, travel, immigrant remittances).

Russia's foreign trade continues low, and

exports and imports about balance because much of her trade is handled through bilateral arrangements. As one might expect, Russian trade with other Communist countries is heavy. But the East-West trade (trade between Communist countries and the rest of the world) is growing from 1954 to 1955; it rose from \$3,600,000,000 to \$4,460,000,000, an increase of 24 per cent. However, this trade accounted for only 2.6 per cent of the total trade of the non-Communist world. But it

Sources for all material used in this section will be found on page 89

## Foreign Trade

### Total Exports and Imports

(in millions of current dollars)

Year	Exports		Imports		Total exports and imports	
	Russia	U. S.	Russia	U. S.	Russia	U. S.
1900.....	368.6	1,478.0	322.4	829.0	691.0	2,307.0
1913.....	782.3	2,484.0	707.2	1,793.0	1,489.5	4,277.0
1928.....	713.5	5,030.0	490.6	4,091.0	904.1	9,121.0
1937.....	326.2	3,298.9	253.1	3,009.9	579.3	6,308.8
1940.....	266.4	3,934.2	272.8	2,540.7	539.2	6,474.9
1946.....	457.0	9,500.0	744.0	4,825.0	1,201.0	14,325.0
1950.....	1,102.0	14,396.0	1,159.0	12,053.0	2,261.0	26,449.0
1953.....	2,800.0	21,265.0	2,800.0	10,954.0	5,600.0*	32,219.0

\* The discrepancy between this figure and the figure of \$5,750 given in the table "Direction of Soviet Foreign Trade" is due to differences in reporting methods.

### Direction of Soviet Foreign Trade

(in millions of current dollars)

	1937	% of total	1948	% of total	1952	% of total	1953	% of total
Total trade <sup>1</sup> .....	780	100.0	2,500	100.0	5,200	100.0	5,750*	100.0
Eastern Communist Europe <sup>2</sup> .....	50	6.4	850	34.0	2,550	49.0	2,970	51.7
Other Communist Countries <sup>3</sup> .....	15	1.9	400	16.0	1,550	29.8	1,730	30.0
Total Communist bloc.....	65	8.3	1,250	50.0	4,100	78.8	4,700	81.8
Western Europe.....	510	65.4	545	21.8	640	12.4	645	11.2
Other non-Communist Countries.....	205	26.3	705	28.2	460	8.8	405	7.0
Total non-Communist bloc.....	715	91.7	1,250	50.0	1,100	21.2	1,050	18.2

<sup>1</sup> Total trade in millions of current dollars is here the sum of the value of exports (F.O.B.) without freight or other charges. Import figures include (C.I.F.) freight and insurance. <sup>2</sup> Bulgaria, Czechoslovakia, Hungary, Eastern Germany, Rumania and Poland. <sup>3</sup> Mainland China, Mongolia, North Korea and Albania. \* The discrepancy between this figure and the figure of 5,600 given in the table "Foreign Trade" is due to differences in reporting methods.

should be noted that by 1955 the following eight countries were carrying on more than 10 per cent of their total trade with

the Communist bloc: Afghanistan, Egypt, Finland, Hong Kong, Iceland, Iran, Turkey and Yugoslavia.

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- Russia**  
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*Bolshaya Sovetskaya Entsiklopedia*;  
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*Economic Survey of Communist China*;  
*Ezhgodnik Ministerstva Finansov za 1902 god*;  
*Tsentralnyi Statisticheskii Komitet, Ezhgodnik Rossi*;  
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*Keating's Contemporary Archives*, London;  
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*Socialist Construction in U.S.S.R. 1936*, Moscow;  
*Sotsialisticheskoye Stroitel'stvo SSSR*, Moskva;  
*U.N. Economic Survey of Europe, 1951, 1954, 1955*.  
*U.N. Statistical Yearbook, 1955*.  
*The U.S.S.R. in Figures 1954*, Moscow.  
 \* Vornesenskiy, N. A., *Volennaya ekonomika SSSR v period otechestvennoy voyny*, Moskva, 1948.  
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- NOTE: Titles of Russian sources marked with an asterisk (\*) are available in English translation.
- United States**  
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 American Medical Association;  
 Automobile Manufacturers Association;  
 Edison Electric Institute;  
*Electrical Merchandising*;  
 Federal Power Commission;  
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 Interstate Commerce Commission;  
*Statistical Abstract of the United States, 1956*, Washington, D. C.  
*United Nations Statistical Yearbook, 1955*;  
 U. S. Department of Agriculture, Agricultural Marketing Service;  
 U. S. Department of Commerce, Bureau of the Census;  
 U. S. Department of Health, Education and Welfare, Office of Education, and Public Health Service;  
 U. S. Department of the Interior, Bureau of Mines;  
 U. S. Department of Labor, Bureau of Labor Statistics.

# ★ WHO'S WHO ★

*Prepared by*

A. N. MARQUIS CO., Publishers of WHO'S WHO IN AMERICA

Locations and dates are those of birth. A name in parentheses is the original name or form of the name of the individual.

The vital statistics offered in this section have been gathered from various sources, including the subjects thereof, but neither *Who's Who in America* nor the *Information Please Almanac* can guarantee the accuracy of each individual item. We have learned to accept the date and place of birth that any lady or gentleman claims for herself or himself and not argue about it. Where we have not been able to learn the date and place of birth, we have not attempted to invent the items.

- AARON, Hank (Henry) (baseball player); Mobile, Ala., Feb. 5, 1934.
- ABBOTT, Bud (William) (actor); Asbury Park, N. J., Oct. 2, 1898.
- ABBOTT, George (director & dramatist); For-estville, N. Y., June 25, 1889.
- ABEL, Walter (actor); St. Paul, Minn., June 6, 1898.
- ACHESON, Dean (U. S. statesman); Middle-town, Conn., Apr. 11, 1893.
- ADAMS, Franklin P. (author); Chicago, Ill., Nov. 15, 1881.
- ADAMS, Samuel Hopkins (novelist); Dun-kirk, N. Y., Jan. 26, 1871.
- ADAMS, Sherman (Asst. to Pres., U. S.); East Dover, Vt., Jan. 8, 1899.
- ADCOCK, Joe (baseball player); Coughatta, La., Oct. 30, 1927.
- ADAMS, Charles (cartoonist); Westfield, N. J., Jan. 7, 1912.
- ADENAUER, Konrad (Chancellor, Ger. Fed. Rep.); Cologne, Ger., Jan. 5, 1876.
- ADLER, Larry (harmonica player); Baltimore, Md., Feb. 10, 1914.
- ADLER, Luther (actor); New York City, May 4, 1903.
- ADLER, Mortimer J. (philosopher); New York City, Dec. 28, 1902.
- AHERNE, Brian (actor); Kings Norton, Eng., May 2, 1902.
- AIKEN, Conrad (poet); Savannah, Ga., Aug. 5, 1889.
- ALBANESE, Licia (soprano); Bari, It., July 22, 1913.
- ALBERT, Eddie (Eddie Albert Helmberger) (actor); Rock Island, Ill., Apr. 22, 1908.
- ALDA, Robert (actor); New York City, Feb. 26, 1914.
- ALDINGTON, Richard (poet & novelist); Hampshire, Eng., 1892.
- ALDRICH, Winthrop W. (U. S. diplomat); Providence, R. I., Nov. 2, 1885.
- ALI, Mohammed (Pakistani statesman & diplomat); Barisal, E. Bengal, Oct. 19, 1909.
- ALLEN, Gracie (comedienne); San Francisco, Calif., July 26, 1906.
- ALLEN, Mel (sports announcer); Birming-ham, Ala., Feb. 14, 1913.
- ALLEN, Steve (comedian); New York City; Dec. 26, 1921.
- ALLYSON, June (Jan Allyson) (actress); New York City, Oct. 7, 1923.
- ALSO, Joseph W., Jr. (journalist); Avon, Conn., Oct. 11, 1910.
- ALSOP, Stewart (journalist); New York City, May 17, 1914.
- ALSTON, Walter (baseball manager); Butler Co., Ohio, Dec. 1, 1911.
- AMECHE, Don (actor); Kenosha, Wis., May 31, 1908.
- AMOROS, Sandy (Edmundo) (baseball player); Matanzas, Cuba, Jan. 30, 1932.
- AMORY, Cleveland (author); Nahant, Mass., Sept. 2, 1917.
- AMOS (Freeman F. Gosden) (actor); Rich-mond, Va., May 5, 1899.
- ANDERSON, Eddie. *See* Rochester.
- ANDERSON, Judith (actress); Adelaide, Austr., Feb. 10, 1898.
- ANDERSON, Marian (contralto); Philadel-phia, Pa., Feb. 17, 1902.
- ANDERSON, Maxwell (dramatist); Atlantic, Pa., Dec. 15, 1888.
- ANDREWS, Dana (actor); Collins, Miss., Jan. 1, 1912.
- ANDREWS, Julie (Julia Wells) (actress); Walton-on-Thames, Eng., Oct. 1, 1935.
- ANDREWS, Roy Chapman (zoologist & ex-plorer); Beloit, Wis., Jan. 26, 1884.
- ANDY (Charles J. Correll) (actor); Peoria, Ill., Feb. 2, 1890.
- ANGELI, Pier (actress); Cagliari, It., June 19, 1932.
- ANTONELLI, Johnny (baseball player); Roch-ester, N. Y., Apr. 12, 1930.
- ARCARO, Eddie (jockey); Cincinnati, Ohio, Feb. 19, 1916.
- ARCHIPENKO, Alexander (sculptor); Kiev, Rus., May 30, 1887.
- ARDEN, Eve (Eunice Quedens) (actress); Mill Valley, Calif.
- ARLEN, Harold (Hyman Arluck) (composer); Buffalo, N. Y., Feb. 15, 1905.



- ARMSTRONG, Henry** (boxer); St. Louis, Mo., Dec. 12, 1912.
- ARMSTRONG, Louis** (trumpeter); New Orleans, La., July 4, 1900.
- ARNAZ, Desl** (Desiderio) (actor & band leader); Santiago, Cuba, Mar. 2, 1917.
- ARNO, Peter** (cartoonist); New York City, Jan. 8, 1904.
- ARRAU, Claudio** (pianist); Chillán, Chile, Feb. 6, 1904.
- ARTHUR, Jean** (Gladys Greene) (actress); New York City, Oct. 17, 1908.
- ASCH, Sholem** (novelist); Kutno, Pol., Nov. 1, 1880.
- ASHBURN, Richie** (baseball player); Tilden, Nebr., Mar. 19, 1927.
- ASTAIRE, Fred** (Frederick Austerlitz) (dancer & actor); Omaha, Neb., May 10, 1899.
- ATKINSON, Brooks** (drama critic); Melrose, Mass., Nov. 28, 1894.
- ATKINSON, Ted** (jockey); Toronto, Ont., Can., June 17, 1916.
- ATLEE, Clement R.** (British statesman); London, Eng., Jan. 3, 1883.
- AUDEN, W. H.** (Wystan Hugh Auden) (poet); York, Eng., Feb. 21, 1907.
- AUER, Mischa** (actor); Petrograd, Rus., Nov. 17, 1905.
- AUTRY, Gene** (actor); Tloga, Tex., Sept. 29, 1907.
- AVERY, Sewell L.** (business executive); Saginaw, Mich., Nov. 4, 1873.
- AYRES, Lew** (actor); Minneapolis, Minn., Dec. 28, 1908.
- BACALL, Lauren** (actress); New York City, Sept. 16, 1924.
- BACCALONI, Salvatore** (basso); Rome, It., Apr. 14, 1900.
- BACKHAUS, Wilhelm** (pianist); Leipzig, Ger., Mar. 26, 1884.
- BAER, Max** (boxer); Omaha, Nebr., Feb. 11, 1909.
- BAILEY, Pearl** (singer); Newport News, Va., Mar. 29, 1918.
- BAINTER, Fay** (actress); Los Angeles, Calif., 1893.
- BAKER, Josephine** (singer); St. Louis, Mo., 1907.
- BALANCHINE, George** (ballet director); St. Petersburg, Rus., Jan. 9, 1904.
- BALDWIN, Faith** (novelist); New Rochelle, N. Y., Oct. 1, 1893.
- BALL, Lucille** (actress); Jamestown, N. Y., Aug. 6, 1911.
- BAMPTON, Rose** (contralto); Cleveland, Ohio, Nov. 28, 1909.
- BANKHEAD, Tallulah** (actress); Huntville, Ala., Jan. 31, 1903.
- BANKS, Ernie** (baseball player); Dallas, Tex., Jan. 31, 1931.
- BANNISTER, Roger** (mile runner); Harrow, Eng., Mar. 24, 1929.
- BAO DAI** (former ruler, Vietnam); Annam, Indo-China, Oct. 22, 1913.
- BARBER, Red** (Walter L.) (sports announcer); Columbus, Miss., Feb. 17, 1908.
- BARBER, Samuel** (composer); West Chester, Pa., Mar. 9, 1910.
- BARBIROLLI, Sir John** (orchestra conductor); London, Eng., Dec. 2, 1899.
- BARKER, Lex** (actor); Rye, N. Y., May 8, 1919.
- BARRYMORE, Ethel** (actress); Philadelphia, Pa., Aug. 15, 1879.
- BARTHELMESS, Richard** (actor); New York City, May 9, 1897.
- BARTHOLOMEW, Freddie** (actor); London, Eng., Mar. 28, 1924.
- BARTON, James** (actor); Gloucester, N. J., Nov. 1, 1890.
- BARUCH, Bernard** (financier); Camden, S. C., Aug. 19, 1870.
- BASIE, Count** (William) (band leader); Red Bank, N. J., Aug. 21, 1906.
- BATCHELOR, Clarence Daniel** (cartoonist); Osage City, Kans.
- BATISTA y ZALDIVAR, Fulgencio** (Cuban statesman); Banos, Cuba, Jan. 16, 1901.
- BAUDOUIN** (King, Belgium); Palace of Laeken, Belg., Sept. 7, 1930.
- BAUER, Hank** (Henry) (baseball player); E. St. Louis, Ill., July 31, 1922.
- BAUGH, Sammy** (football coach); Temple, Tex., Mar. 17, 1914.
- BAUM, Vicki** (novelist); Vienna, Aus., Jan. 24, 1896.
- BAXTER, Anne** (actress); Michigan City, Ind., May 7, 1923.
- BAZIOTES, William** (painter); Pittsburgh, Pa., June 11, 1912.
- BECK, David** (labor leader); Stockton, Calif., June 16, 1894.
- BEEBE, William** (zoologist); Brooklyn, N. Y., July 29, 1877.
- BEECHAM, Sir Thomas** (orchestra conductor); St. Helens, Eng., Apr. 29, 1879.
- BEGLEY, Ed** (Edward) (actor); Hartford, Conn., Mar. 25, 1901.
- BEHRMAN, S. N.** (Samuel N.) (dramatist); Worcester, Mass., June 9, 1893.
- BELAFONTE, Harry** (singer); New York City, Mar. 1, 1927.
- BELLAMY, Ralph** (actor); Chicago, Ill., June 17, 1905.
- BEMELMANS, Ludwig** (essayist); Meran, Tirol, Apr. 27, 1898.
- BENDIX, William** (actor); New York City, Jan. 14, 1906.
- BEN-GURION, David** (Israeli statesman); Plónsk, Pol., Oct. 16, 1886.
- BENNETT, Joan** (actress); Palisades, N. J., Feb. 27, 1910.
- BENNETT, Robert Russell** (composer); Kansas City, Mo., June 15, 1894.
- BENNY, Jack** (Benny Kubelsky) (comedian); Waukegan, Ill., Feb. 14, 1894.
- BENSON, Ezra Taft** (Secy. of Agriculture, U. S.); Whitney, Idaho, Aug. 4, 1899.
- BENTON, Thomas Hart** (painter); Neosho, Mo., Apr. 15, 1889.
- BERGEN, Edgar** (ventriloquist); Chicago, Ill., Feb. 16, 1903.
- BERGMAN, Ingrid** (actress); Stockholm, Swed., 1917.
- BERKSON, Seymour** (publisher); Chicago, Ill., Jan. 30, 1905.
- BERLE, Milton** (Milton Berlinger) (comedian); New York City, July 12, 1908.
- BERLIN, Irving** (Isidore Baline) (song writer); Temum, Russia, May 11, 1888.
- BERLIN, Richard E.** (publisher); Omaha, Nebr., Jan. 18, 1894.

- BERNSTEIN, Leonard** (composer & conductor); Lawrence, Mass., Aug. 25, 1918.
- BERRA, Yogi** (Lawrence) (baseball player); St. Louis, Mo., May 12, 1925.
- BERRYMAN, James T.** (cartoonist); Washington, D. C., June 3, 1902.
- BEST, Edna** (actress); Hove, Sussex, Eng., Mar. 3, 1900.
- BETTIS, Valerie** (actress & dancer); Houston, Tex.
- BEVAN, Aneurin** (British Labour leader); Tredegar, Eng., Nov. 1897.
- BICKFORD, Charles** (actor); Cambridge, Mass.
- BIDAULT, Georges** (French statesman); Moulins, Fr., Oct. 5, 1899.
- BING, Rudolf** (opera executive); Vienna, Aus., Jan. 9, 1902.
- BJOERLING, Jussi** (tenor); Stora Tuna Dalarna, Swed., Feb. 2, 1911.
- BLACK, Hugo L.** (U. S. jurist); Harlan, Ala., Feb. 27, 1886.
- BLACKMER, Sidney** (actor); Salisbury, N. C., July 13, 1898.
- BLAIK, Earl H.** (football coach); Detroit, Mich., Feb. 15, 1897.
- BLAINE, Vivian** (actress); Newark, N. J., Nov. 21, 1921.
- BLITZSTEIN, Marc** (composer); Philadelphia, Pa., Mar. 2, 1905.
- BLOCH, Ernest** (composer); Geneva, Switz., July 24, 1880.
- BLOCK, Herbert L.** See Herblock.
- BLOOM, Claire** (actress); London, Eng., Feb. 15, 1931.
- PLYTH, Ann** (actress); Mt. Kisco, N. Y., Aug. 16, 1928.
- BOGART, Humphrey** (actor); New York City, Dec. 25, 1900.
- BOHLEN, Charles E.** (U. S. diplomat); Clayton, N. Y., Aug. 30, 1904.
- BOHR, Niels** (physicist); Copenhagen, Den., Oct. 7, 1885.
- BOLGER, Ray** (actor); Dorchester, Mass., Jan. 10, 1906.
- BOONE, Richard** (actor); Los Angeles, California.
- BOOTH, Shirley** (Thelma Booth Ford) (actress); New York City, Aug. 30, 1907.
- BORGE, Victor** (pianist & comedian); Copenhagen, Den., Jan. 3, 1909.
- BORGNINE, Ernest** (actor); Hamden, Conn., Jan. 24, 1917.
- BORI, Lucrezia** (Lucrecia Borja González de Riancho) (soprano); Valencia, Sp., Dec. 24, 1887.
- BORZAGE, Frank** (movie director); Salt Lake City, Utah, Apr. 23, 1893.
- BOSTWICK, Pete** (George H.) (polo player); New York City, Aug. 14, 1909.
- BOSWELL, Connie** (singer); New Orleans, La., Dec. 3.
- BOTTOME, Phyllis** (novelist); Rochester, Eng., May 31, 1884.
- BOUDREAU, Lou** (baseball manager); Harvey, Ill., July 17, 1917.
- BOWEN, Catherine** Drinker (biographer); Haverford, Pa., Jan. 1, 1897.
- BOWEN, Elizabeth** (novelist); Dublin, Ire., June 7, 1899.
- BOWLES, Chester** (U. S. diplomat); Springfield, Mass., Apr. 5, 1901.
- BOWLES, Paul** (novelist); New York City, Dec. 30, 1910.
- BOYD, William** (actor); Cambridge, Ohio, June 5, 1898.
- BOYER, Charles** (actor); Figeac, Fr., Aug. 28, 1899.
- BOYER, Ken** (baseball player); Liberty, Mo., May 20, 1931.
- BOYLE, Kay** (novelist & poet); St. Paul, Minn., Feb. 19, 1903.
- BRACKEN, Eddie** (actor); Astoria, N. Y., Feb. 7, 1920.
- BRADDOCK, James J.** (boxer); North Bergen, N. J., Dec. 6, 1905.
- BRADLEY, Omar N.** (U. S. general); Clark, Mo., Feb. 12, 1893.
- BRAGAN, Bob** (baseball manager); Birmingham, Ala., Oct. 20, 1917.
- BRAILOWSKY, Alexander** (pianist); Kiev, Rus., Feb. 16, 1896.
- BRANDO, Marlon** (actor); Omaha, Nebr., Apr. 3, 1924.
- BRAQUE, Georges** (painter); Argenteuil, Fr., May 13, 1882.
- BRENNAN, Walter** (actor); Lynn, Mass., July 25, 1894.
- BRENNAN, William J., Jr.** (U. S. jurist); Newark, N. J., Apr. 25, 1906.
- BRIDGES, Lloyd** (actor); San Leandro, Calif., Jan. 15, 1913.
- BRITTEN, Benjamin** (composer); Lowestoft, Eng., Nov. 22, 1913.
- BROOK, Alexander** (painter); Brooklyn, N. Y., July 14, 1898.
- BROOKS, Van Wyck** (literary critic); Plainfield, N. J., Feb. 16, 1886.
- BROWN, Cecil** (radio commentator); New Brighton, Pa., Sept. 14, 1907.
- BROWN, Joe E.** (actor); Holgate, Ohio, July 28, 1892.
- BROWN, John Mason** (drama critic); Louisville, Ky., July 3, 1900.
- BROWN, Pamela** (actress); London, Eng., July 3, 1918.
- BROWN, Vanessa** (Smylla Brind) (actress); Vienna, Aus., Mar. 24, 1928.
- BROWNELL, Herbert, Jr.** (Attorney General U. S.); Peru, Nebr., Feb. 20, 1904.
- BRUCE, Carol** (singer); Great Neck, N. Y., Nov. 15, 1919.
- BRUNDAGE, Avery** (sports executive); Detroit, Mich., Sept. 28, 1887.
- BRYNNER, Yul** (actor); Sakhalin (an island off Japan), 1915.
- BRYSON, Lyman** (educator); Valentine, Nebr., July 12, 1888.
- BUCK, Pearl S.** (novelist); Hillsboro, W. Va., June 26, 1892.
- BUDGE, J. Donald** (tennis player); Oakland, Calif., June 13, 1915.
- BUHL, Bob** (baseball player); Saginaw, Mich., Aug. 12, 1928.
- BULGANIN, Nikolai A.** (Soviet statesman); Nizhni-Novgorod, Rus., June 11, 1895.
- BURCHFIELD, Charles E.** (watercolorist); Ashtabula, Ohio, Apr. 9, 1893.
- BURDETTE, Lou** (baseball player); Nitro, W. Va., Nov. 22, 1926.
- BURKE, Adm. Arleigh A.** (Ch. of Naval Operations U. S.); Boulder, Colo., Oct. 19, 1901.
- BURKE, Billie** (actress); Washington, D. C., Aug. 7, 1886.

- BURNS, Arthur F. (Economic Adviser to President, U. S.); Stanislau, Austria, Apr. 27, 1904.
- BURNS, George (Nathan Birnbaum) (comedian); New York City, Jan. 20, 1896.
- BURROWS, Abe (playwright & producer); New York City, Dec. 18, 1910.
- BURTON, Harold H. (U. S. jurist); Jamaica Plain, Mass., June 29, 1888.
- BURTON, Richard (actor); Wales, 1926.
- BUSH, Vannavar (engineer); Everett, Mass., Mar. 11, 1890.
- BUTLER, Richard Austen (British statesman); Attock Seral, India, December 9, 1902.
- BUTTONS, Red (Aaron Chwatt) (comedian); New York City, Feb. 5, 1919.
- BYRD, Richard E. (explorer); Winchester, Va., Oct. 25, 1888.
- CABELL, James Branch (novelist); Richmond, Va., Apr. 14, 1879.
- CADMUS, Paul (painter & etcher); New York City, Dec. 17, 1904.
- CAESAR, Sid (comedian); Yonkers, N. Y., Sept. 8, 1922.
- CAGNEY, James (actor); New York City, July 17, 1904.
- CAIN, James M. (novelist); Annapolis, Md., July 1, 1892.
- CALDER, Alexander ("mobile" sculptor); Lawnton, Pa., July 22, 1898.
- CALDWELL, Erskine (novelist); White Oak, Ga., Dec. 17, 1903.
- CALDWELL, Taylor (novelist); Preswick, Eng., Sept. 7, 1900.
- CALHOUN, Rory (Francis Durgin) (actor); Los Angeles, Calif., Aug. 8, 1923.
- CALLAS, Maria (soprano); New York City, Dec. 4, 1923.
- CALLOWAY, Cab (band leader); Rochester, N. Y., Dec. 25, 1907.
- CAMPANELLA, Roy (baseball player); Homestead, Pa., Nov. 19, 1921.
- CAMUS, Albert (novelist); Algiers, 1913.
- CANBY, Henry Seidel (literary critic); Wilmington, Del., Sept. 6, 1878.
- CANIFF, Milton (cartoonist); Hillsboro, Ohio, Feb. 28, 1907.
- CANOVA, Judy (actress); Jacksonville, Fla., Nov. 20, 1916.
- CANTOR, Eddie (Edward Iskowitz) (comedian); New York City, Jan. 31, 1892.
- CAPOTE, Truman (novelist); New Orleans, La., Sept. 30, 1924.
- CAPP, Al (cartoonist); New Haven, Conn., Sept. 28, 1909.
- CAPRA, Frank (movie director); Palermo, Sicily, May 18, 1897.
- CAREY, MacDonald (actor); Sioux City, Iowa, Mar. 15, 1913.
- CARLE, Frankie (pianist); Providence, R. I., Mar. 15, 1903.
- CARLSON, Richard (actor); Albert Lea, Minn., Apr. 29, 1912.
- CARMICHAEL, Hoagy (song writer); Bloomington, Ind., Nov. 22, 1899.
- CARNEY, Art (actor); Mt. Vernon, N. Y.
- CARNOVSKY, Morris (actor); St. Louis, Mo., 1898.
- CARON, Leslie (actress); Paris, Fr., July 1.
- CARRADINE, John (actor); New York City, Feb. 5, 1906.
- CARROLL, John (painter); Wichita, Kans., Aug. 14, 1892.
- CARROLL, Leo G. (actor); Weedon, Eng., Feb. 26, 1909.
- CARROLL, Paul Vincent (dramatist); Dundalk, Ire., July 10, 1900.
- CARSON, Jack (actor); Carman, Can., Oct. 27, 1910.
- CARSON, Rachel (science writer); Springdale, Pa., May 27, 1907.
- CARY, Joyce (novelist); Londonderry, Ire., Dec. 7, 1888.
- CASADESUS, Robert (pianist); Paris, Fr., Apr. 7, 1899.
- CASALS, Pablo (cellist); Vendrell, Sp., Dec. 29, 1876.
- CAVALLERO, Carmen (band leader); New York City, May 6, 1913.
- CHAGALL, Marc (painter); Vitebsk, Rus., July 7, 1887.
- CHAMPION, Gower (dancer & actor); Geneva, Ill., June 22.
- CHAMPION, Marge (dancer & actress); Los Angeles, Calif., Sept. 2.
- CHANDLER, Jeff (Ira Grossel) (actor); Brooklyn, N. Y., Dec. 15, 1918.
- CHANNING, Carol (comedienne); Seattle, Wash., Jan. 31, 1921.
- CHAPLIN, Charles (comedian); London, Eng., Apr. 16, 1889.
- CHARLES, Ezzard (boxer); Atlanta, Ga., July 7, 1921.
- CHARISSE, Cyd (Tula Finklea) (actress, dancer); Amarillo, Tex., Mar. 8, 1923.
- CHASE, Ilka (actress); New York City, Apr. 8, 1905.
- CHÁVEZ, Carlos (composer); near Mexico City, Mex., June 13, 1899.
- CHEVALIER, Maurice (actor); Paris, Fr., Sept. 12, 1888.
- CHIANG Kai-shek (President, Nat. China); Feng-hwa, China, Oct. 31, 1887.
- CHIRICO, Giorgio de (painter); Volos, Gr., July 10, 1888.
- CHOU En-lai (Premier, Comm. China); Hualyin, China, 1898.
- CHRISTIAN, Linda (actress); Tampico, Mex., 1925.
- CHRISTIE, Agatha (novelist); Torquay, Eng., 1897.
- CHURCHILL, Sarah (actress); London, Eng., Oct. 7, 1914.
- CHURCHILL, Sir Winston S. (British statesman); Oxfordshire, Eng., Nov. 30, 1874.
- CLAIR, René (René Chomette) (movie director); Paris, Fr., Nov. 11, 1898.
- CLAIRE, Ina (Ina Fagan) (actress); Washington, D. C., Oct. 15, 1892.
- CLARK, Bobby (comedian); Springfield, Ohio, June 16, 1888.
- CLARK, Dane (actor); New York City, Feb. 18, 1915.
- CLARK, Thomas C. (U. S. jurist); Dallas, Tex., Sept. 23, 1899.
- CLIFT, Montgomery (actor); Omaha, Nebr., Oct. 17, 1920.
- CLOETE, Stuart (novelist); Paris, Fr., July 23, 1897.



- CLOONEY**, Rosemary (singer); Maysville, Ky.  
**CLURMAN**, Harold (stage director); New York City, Sept. 18, 1901.  
**COBB**, Lee J. (actor); New York City, Dec. 8, 1911.  
**COBB**, Ty (Tyrus R.) (baseball player); Banks Co., Ga., Dec. 17, 1886.  
**COBURN**, Charles (actor); Savannah, Ga., June 19, 1877.  
**COCA**, Imogene (comedienne); Philadelphia, Pa.  
**COCTEAU**, Jean (poet & dramatist); Maisons-Laffitte, Fr., July 5, 1891.  
**COLBERT**, Claudette (Lily Chachoin) (actress); Paris, Fr., Sept. 13, 1905.  
**COLE**, Nat King (Nathaniel Adams Coles) (singer); Montgomery, Ala., Mar. 17, 1919.  
**COLLINGE**, Patricia (actress); Dublin, Ire., Sept. 20, 1894.  
**COLMAN**, Ronald (actor); Richmond, Eng., Feb. 9, 1891.  
**COMMAGER**, Henry S. (historian); Pittsburgh, Pa., Oct. 25, 1902.  
**COMO**, Perry (Pierino) (singer); Canonsburg, Pa., May 18, 1913.  
**COMPTON**, Arthur H. (physicist); Wooster, Ohio, Sept. 10, 1892.  
**CONANT**, James B. (U. S. diplomat); Dorchester, Mass., Mar. 26, 1893.  
**CONLEY**, Donald (baseball player); Muskogee, Okla., Nov. 10, 1930.  
**CONNELLY**, Marc (dramatist); McKeesport, Pa., Dec. 13, 1890.  
**CONNOLLY**, Maureen (tennis player); San Diego, Calif., Sept. 17, 1934.  
**CONROY**, Frank (actor); Derby, Eng., Oct. 14, 1890.  
**CONTE**, Richard (actor); New York City, Mar. 24, 1914.  
**COOGAN**, Jackie (actor); Los Angeles, Calif., Oct. 28, 1914.  
**COOK**, Donald (actor); Portland, Oreg., Sept. 26, 1901.  
**COOKE**, Alistair (news commentator); Manchester, Eng., Nov. 20, 1908.  
**COOPER**, Gary (Frank) (actor); Helena, Mont., May 7, 1901.  
**COOPER**, Jackie (actor); Los Angeles, Calif., Sept. 15, 1922.  
**COPLAND**, Aaron (composer); Brooklyn, N. Y., Nov. 14, 1900.  
**COREY**, Wendell (actor); Dracut, Mass., Mar. 20, 1914.  
**CORNELL**, Katharine (actress); Berlin, Ger., Feb. 16, 1898.  
**CORRELL**, Charles J. *See* Andy  
**COSTAIN**, Thomas Bertram (novelist); Brantford, Ont., Can., May 8, 1885.  
**COSTELLO**, Lou (Louis Cristillo) (actor); Paterson, N. J., Mar. 6, 1908.  
**COTTEN**, Joseph (actor); Petersburg, Va., 1905.  
**COTY**, René (Pres., France), Le Havre, Fr., Mar. 20, 1882.  
**COWARD**, Noel (dramatist & actor); Teddington, Eng., Dec. 16, 1899.  
**COWLES**, Gardner (publisher); Algona, Iowa, Jan. 31, 1903.  
**COWLEY**, Malcolm (critic & editor); Bel-sano, Pa., Aug. 24, 1898.  
**COX**, James M. (publisher); Jacksonburg, Ohio, Mar. 31, 1870.  
**COX**, Wally (Wallace Maynard Cox) (comedian); Detroit, Mich., Dec. 6, 1924.  
**COZZENS**, James Gould (novelist); Chicago, Ill., Aug. 19, 1903.  
**CRAIN**, Jeanne (actress); Barstow, Calif., May 25, 1925.  
**CRAWFORD**, Broderick (actor); Philadelphia, Pa., Dec. 9, 1911.  
**CRAWFORD**, Joan (Lucille LeSueur) (actress); San Antonio, Tex., Mar. 23, 1908.  
**CRONIN**, A. J. (Archibald J. Cronin) (novelist); Cardross, Scot., July 19, 1896.  
**CRONIN**, Joe (baseball executive); San Francisco, Calif., Oct. 12, 1906.  
**CRONYN**, Hume (actor); London, Ont., Can.  
**CROSBY**, Bing (Harry) (actor & singer); Tacoma, Wash., May 2, 1904.  
**CROSBY**, Bob (band leader & actor); Spokane, Wash., Aug. 23, 1913.  
**CROSS**, Milton (radio announcer); New York City, Apr. 16, 1897.  
**CROTHERS**, Rachel (dramatist); Bloomington, Ill., Dec. 12, 1878.  
**CROUSE**, Russel (dramatist); Findlay, Ohio, Feb. 20, 1893.  
**CUGAT**, Xavier (orchestra leader); Barcelona, Sp., Jan. 1, 1900.  
**CUKOR**, George (movie director); New York City, July 7, 1899.  
**CUMMINGS**, E. E. (Edward Estlin Cummings) (poet); Cambridge, Mass., Oct. 14, 1894.  
**CUMMINGS**, Robert (actor); Joplin, Mo., June 9, 1910.  
**CURTIS**, Tony (actor); New York City, June 3, 1925.  
**CURTIZ**, Michael (movie director); Budapest, Hung., Dec. 24, 1888.  
**CURZON**, Clifford (pianist); London, Eng., May 18, 1907.  
**DAHL**, Arlene (actress); Minneapolis, Minn., Aug. 11.  
**DAILEY**, Dan (actor); New York City.  
**DALI**, Salvador (painter); Figueras, Sp., May 11, 1904.  
**DAMONE**, Vic (singer); Brooklyn, N. Y., June 12, 1928.  
**DANDRIDGE**, Dorothy (actress); Cleveland, Ohio.  
**DANIELS**, Billy (singer); Jacksonville, Fla., Sept. 14, 1912.  
**DANILOVA**, Alexandra (dancer); Peterhof, Rus.  
**DARCEL**, Denise (actress); Paris, Fr., 1926.  
**DARK**, Alvin (baseball player); Comanche, Okla., Jan. 7, 1923.  
**DARNELL**, Linda (actress); Dallas, Tex.  
**DARRIEUX**, Danielle (actress); Bordeaux, Fr., May 1, 1917.  
**DAVIES**, Marion (actress); New York City, Jan. 1, 1900.  
**DAVIS**, Bette (actress); Lowell, Mass., Apr. 5, 1908.  
**DAVIS**, Elmer (radio commentator); Aurora, Ind., Jan. 13, 1890.  
**DAVIS**, Joan (actress); St. Paul, Minn., June 29, 1912.  
**DAVIS**, Sammy, Jr. (singer); New York City, Jan. 1926.  
**DAVIS**, Stuart (painter); Philadelphia, Pa., Dec. 7, 1894.

- DAY, Dennis (singer); New York City, May 21, 1917.
- DAY, Doris (Doris von Kappelhoff) (singer); Cincinnati, Ohio, Apr. 3, 1924.
- DAY, Laraine (Loraine Johnson) (actress); Roosevelt, Utah, Oct. 13, 1920.
- DEAN, Dizzy (Jay Hanna Dean) (baseball player); Lucas, Ark., Jan. 16, 1911.
- DE GAULLE, Charles (French statesman); Lille, Fr., Nov. 22, 1890.
- DE HAVEN, Gloria (actress); Los Angeles, Calif., July 23.
- DE HAVILLAND, Olivia (actress); Tokyo, Jap., July 1, 1916.
- DEMARET, Jim (golfer); Houston, Tex., May 10, 1910.
- de MILLE, Agnes (choreographer); New York City.
- de MILLE, Cecil B. (movie director); Ashfield, Mass., Aug. 12, 1881.
- DEMPSEY, Jack (William H.) (boxer); Manassa, Colo., June 24, 1894.
- DERAIN, André (painter); Chatou, Fr., June 10, 1880.
- DEREK, John (actor); Hollywood, Calif., Aug. 12, 1926.
- DE SICA, Vittorio (actor & movie director); Sora, It., July 7, 1901.
- DE VALERA, Eamon (Irish statesman); New York City, Oct. 14, 1882.
- DEVINE, Andy (actor); Flagstaff, Ariz., Oct. 7, 1905.
- DEWEY, Thomas E. (U. S. statesman); Owosso, Mich., Mar. 24, 1902.
- DE WILDE, Brandon (actor); New York City, Apr. 9, 1942.
- DICKSON, Murry (baseball player); Tracy, Mo., Aug. 21, 1916.
- DIETRICH, Marlene (Maria Magdalena von Losch) (actress); Berlin, Dec. 27, 1904.
- DILLARD, Harrison (hurdler); Cleveland, Ohio, July 8, 1923.
- DILLON, C. Douglas (U. S. diplomat); Geneva, Switz., Aug. 21, 1909.
- DIMAGGIO, Joe (baseball player); Martinez, Calif., Nov. 25, 1914.
- DIOR, Christian (fashion designer); Granville, Normandy, Fr., Jan. 21, 1905.
- DISNEY, Walt (animated cartoonist); Chicago, Ill., Dec. 5, 1901.
- DODDS, Harold Willis (educator); Utica, Pa., June 28, 1889.
- DOHNÁNYI, Ernst von (composer); Pressburg, Slovakia, July 27, 1877.
- DOLIN, Anton (dancer & choreographer); Salford, Sussex, Eng., July 27, 1904.
- DONAT, Robert (actor); Withington, Eng., Mar. 18, 1905.
- DONLEVY, Brian (actor); Portadown, Ire., Feb. 9, 1903.
- DONOVAN, Richard (baseball player); Quincy, Mass., Dec. 7, 1927.
- DORATI, Antal (orchestra conductor); Budapest, Hung., Apr. 9, 1906.
- DORSEY, Tommy (band leader); Mahanoy Plane, Pa., Nov. 19, 1905.
- DOS PASSOS, John (novelist); Chicago, Ill., Jan. 14, 1896.
- DOUGLAS, Kirk (Issur Danielovitch) (actor); Amsterdam, N. Y., Dec. 9, 1916.
- DOUGLAS, Melvyn (Melvyn Hesselberg) (actor); Macon, Ga., Apr. 5, 1901.
- DOUGLAS, Paul (actor); Philadelphia, Pa., Apr. 11, 1907.
- DOUGLAS, William O. (U. S. jurist); Maine, Minn., Oct. 16, 1898.
- DOWLING, Eddie (actor & director); Woonsocket, R. I., Dec. 9, 1894.
- DOWNEY, Morton (singer); Wallingford, Conn., Nov. 14, 1902.
- DRAKE, Alfred (singer & actor); New York City, Oct. 7, 1914.
- DRAPER, Paul (dancer); Florence, It., Oct. 25, 1911.
- DRAPER, Ruth (actress); New York City, Dec. 2, 1884.
- DRESSEN, Chuck (Charles) (baseball manager); Decatur, Ill., Sept. 20, 1898.
- DRUMMOND, Roscoe (journalist); Theresa, N. Y.
- DRYSDALE, Don (baseball player); Van Nuys, Calif., July 23, 1936.
- DUBINSKY, David (labor leader); Brest-Litovsk, Pol., Feb. 22, 1892.
- DUCLOS, Jacques (French Communist leader); Louey, Fr., Oct. 2, 1896.
- DUFFY, Edmund (cartoonist); Jersey City, N. J., Mar. 1, 1899.
- DULLES, Allen W. (CIA Director, U. S.); Watertown, N. Y., Apr. 7, 1893.
- DULLES, John Foster (Secy. of State, U. S.); Washington, D. C., Feb. 25, 1888.
- DU MAURIER, Daphne (novelist); London, Eng., May 13, 1907.
- DUNCAN, Todd (singer); Danville, Ky., Feb. 12, 1903.
- DUNHAM, Katherine (dancer); Chicago, Ill.
- DUNNE, Irene (actress); Louisville, Ky., Dec. 20, 1904.
- DUNNOCK, Mildred (actress); Baltimore, Md.
- DURANTE, Jimmy (comedian); New York City, Feb. 10, 1893.
- DURBIN, Deanna (Edna) (actress); Winnipeg, Can., Dec. 4, 1922.
- DUROCHER, Leo (former baseball manager); West Springfield, Mass., July 27, 1906.
- DYKES, Jimmie (baseball manager); Philadelphia, Pa., Nov. 10, 1896.
- EASTMAN, Max (social writer); Canandaigua, N. Y., Jan. 4, 1883.
- ECKSTINE, Billy (singer); Pittsburgh, Pa., July 8, 1914.
- EDDY, Nelson (baritone); Providence, R. I., June 29, 1901.
- EDEN, Sir Anthony (Prime Minister, Gr. Brit.); England, June 12, 1897.
- EGLEVSKY, André (dancer); Moscow, Rus., Dec. 21, 1917.
- EISENHOWER, Dwight D. (President, U. S.); Denison, Tex., Oct. 14, 1890.
- EISENHOWER, Milton S. (educator); Abilene, Kans., Sept. 15, 1899.
- ELDRIDGE, Florence (Florence McKechnie) (actress); Brooklyn, N. Y., Sept. 5, 1901.
- ELIOT, T. S. (Thomas Stearns Eliot) (poet); St. Louis, Mo., Sept. 26, 1888.
- ELIZABETH II (Queen, Gr. Brit., etc.); London, Eng., Apr. 21, 1926.
- ELLINGTON, Duke (Edward) (band leader); Washington, D. C., Apr. 29, 1899.
- ELMAN, Mischa (violinist); Stalnoye, Rus., Jan. 20, 1891.

- EMERSON, Faye (actress); Elizabeth, La., July 8, 1917.
- EPSTEIN, Sir Jacob (sculptor); New York City, Nov. 10, 1880.
- ERSKINE, Carl (baseball player); Anderson, Ind., Dec. 13, 1926.
- EVANS, Dame Edith (actress); London, Eng., Feb. 8, 1888.
- EVANS, Maurice (actor); Dorchester, Eng., June 3, 1901.
- EWELL, Tom (Yewell Tompkins) (actor); Owensboro, Ky., Apr. 29, 1909.
- FABRAY, Nanette (Nanette Fabarés) (actress); San Diego, Calif., Oct. 27, 1922.
- FADIMAN, Clifton (literary critic); Brooklyn, N. Y., May 15, 1904.
- FAIRBANKS, Douglas, Jr., (actor); New York City, Dec. 9, 1909.
- FAIRLESS, Benjamin F. (industrialist); Pigeon Run, Ohio, May 3, 1890.
- FALKENBURG, Jinx (Eugenia) (actress); Barcelona, Sp., Jan. 21, 1919.
- FAROUK I (former King, Egypt); Cairo, Egy., Feb. 11, 1920.
- FARRAR, Geraldine (soprano); Melrose, Mass., Feb. 28, 1882.
- FARRELL, Charles (actor); Dublin, Ire., Aug. 6, 1905.
- FARRELL, James T. (novelist); Chicago, Ill., Feb. 27, 1904.
- FAST, Howard (novelist); New York City, Nov. 11, 1914.
- FAULKNER, William (novelist); New Albany, Miss., Sept. 25, 1897.
- FAURE, Edgar (French statesman); Béziers, Fr., Aug. 18, 1908.
- FAY, Frank (actor); San Francisco, Calif., Nov. 17, 1897.
- FAYE, Alice (Alice Leppert) (actress); New York City, May 5, 1915.
- FELLER, Bobby (baseball player); Van Meter, Iowa, Nov. 3, 1918.
- FERBER, Edna (novelist); Kalamazoo, Mich., Aug. 15, 1887.
- FERNANDEL (Fernand Contandin) (actor); Marseille, France, May 8, 1903.
- FERRARESE, Don (baseball player); Oakland, Calif., June 19, 1929.
- FERRER, Jose (actor); Puerto Rico, 1909.
- FERRER, Mel (actor); Elberon, N. J., Aug. 25, 1917.
- FEUCHTWANGER, Lion (novelist); Munich, Ger., July 7, 1884.
- FIEDLER, Arthur (orchestra conductor); Boston, Mass., Dec. 17, 1894.
- FIELD, Betty (actress); Boston, Mass., Feb. 8, 1918.
- FIELD, Marshall (newspaperman); Chicago, Ill., Sept. 28, 1893.
- FIELD, Marshall, Jr. (newspaperman); New York City, June 15, 1916.
- FIELDS, Gracie (actress); Rochdale, Eng., Jan. 9, 1898.
- FISHER, Dorothy Canfield (novelist); Lawrence, Kans., Feb. 17, 1879.
- FISHER, Eddie (singer); Philadelphia, Pa.
- FISHER, Geoffrey Francis (Archbishop of Canterbury); Higham Rectory, Nuneaton, Eng., May 5, 1887.
- FITZGERALD, Barry (William J. Shields) (actor); Dublin, Ire., Mar. 1888.
- FITZGERALD, Ella (singer); Newport News, Va., Apr. 25, 1918.
- FITZGERALD, Geraldine (actress); Dublin, Ire., Nov. 24, 1914.
- FITZSIMMONS, Sunny Jim (horse trainer); Sheepshead Bay, N. Y., July 23, 1874.
- FLAGSTAD, Kirsten (soprano); Hamar, Nor., July 12, 1895.
- FLEMING, Rhonda (Marilyn Louis) (actress); Los Angeles, Calif., Aug. 10, 1923.
- FLYNN, Errol (actor); Hobart, Tasmania, June 20, 1909.
- FOCH, Nina (actress); Leyden, Neth., Apr. 20, 1924.
- FONDA, Henry (actor); Grand Island, Nebr., May 16, 1905.
- FONTAINE, Joan (actress); Tokyo, Jap., Oct. 22, 1917.
- FONTANNE, Lynn (actress); London, Eng., 1887.
- FORTEYN, Dame Margot (Margaret Hookham) (ballerina); Reigate, Eng., May 18, 1919.
- FORD, Glenn (Gwyllyn Ford) (actor); Quebec, Can., May 1, 1922.
- FORD, Henry, II (industrialist); Detroit, Mich., Sept. 4, 1917.
- FORD, John (movie director); Cape Elizabeth, Maine, Feb. 1, 1895.
- FORD, Whitey (Edward) (baseball player); New York City, Oct. 21, 1928.
- FORESTER, C. S. (Cecil Scott Forester) (novelist); Cairo, Egypt, Aug. 27, 1899.
- FORSTER, E. M. (Edward M.) (novelist); England, 1879.
- FORSYTHE, John (actor); Penns Grove, N. J., Jan. 29, 1918.
- FOWLER, Gene (biographer); Denver, Colo., 1890.
- FOX, Nellie (Jacob Nelson Fox) (baseball player); St. Thomas, Pa., Dec. 25, 1927.
- FRANCESCATTI, Zino (violinist); Marseille, Fr., Aug. 9, 1905.
- FRANCIS, Arlene (Arlene Francis Kazanjian) (actress); Boston, Mass., 1908.
- FRANCO, Francisco (Chief of State, Spain); El Ferrol, Sp., Dec. 4, 1892.
- FRANKEN, Rose (dramatist & novelist); Gainesville, Tex., 1898.
- FRANKFURTER, Felix (U. S. jurist); Vienna, Aus., Nov. 15, 1882.
- FRAWLEY, William (actor); Burlington Iowa, Feb. 26, 1893.
- FREDERICK IX (King, Denmark); nr. Copenhagen, Den., Mar. 11, 1899.
- FREEMAN, Hershell (baseball player); Gadsden, Ala., July 1, 1928.
- FRICK, Ford C. (baseball executive); Wawaka, Ind., Dec. 19, 1894.
- FRIEND, Owen Lacey, Jr. (baseball player); Granite City, Ill., Mar. 21, 1927.
- FRIEND, Robert (baseball player); Lafayette, Ind., Mar. 24, 1930.
- FRIML, Rudolf (composer); Prague, Czech. Dec. 7, 1884.
- FRISCH, Frank F. (baseball player); New York City, Sept. 9, 1898.
- FROMAN, Jane (singer); St. Louis, Mo., Nov. 10, 1911.
- FROST, Robert (poet); San Francisco, Calif. Mar. 26, 1875.



- FRY, Christopher (dramatist); Bristol, Eng., Dec. 18, 1907.
- FUNSTON, George Keith (financial executive); Waterloo, Iowa, Oct. 12, 1910.
- FURILLO, Carl (baseball player); Stony Creek Mills, Pa., Mar. 8, 1922.
- GABIN, Jean (actor); Paris, Fr., May 17, 1904.
- GABLE, Clark (actor); Cadiz, Ohio, Feb. 1, 1901.
- GALLICO, Paul (author); New York City, July 26, 1897.
- GALLI-CURCI, Amelita (soprano); Milan, It., Nov. 18, 1889.
- GALLUP, George H. (public opinion statistician); Jefferson, Iowa, Nov. 18, 1901.
- GANNETT, Frank E. (publisher); Bristol, N. Y., Sept. 15, 1876.
- GANNETT, Lewis (literary critic); Rochester, N. Y., Oct. 3, 1891.
- GARBER, Ned (baseball player); Ney, Ohio, Dec. 25, 1925.
- GARBO, Greta (Greta Gustafsson) (actress); Stockholm, Swed., Sept. 18, 1905.
- GARCIA, Mike (baseball player); San Gabriel, Calif., Nov. 17, 1923.
- GARDEN, Mary (soprano); Aberdeen, Scot., Feb. 20, 1877.
- GARDINER, Reginald (actor); Wimbledon, Eng., Feb. 27, 1903.
- GARDNER, Ava (actress); Smithfield, North Carolina.
- GARDNER, Ed (Edward Poggenberg) (actor); Astoria, N. Y., June 29, 1905.
- GARDNER, Erle Stanley (novelist); Malden, Mass., July 17, 1889.
- GARGAN, William (actor); Brooklyn, N. Y., July 17, 1905.
- GARLAND, Judy (Frances Gumm) (actress); Grand Rapids, Minn., June 10, 1922.
- GARROWAY, Dave (comedian); Schnectady, N. Y., July 13, 1913.
- GARSON, Greer (actress); County Down, Ireland.
- GAXTON, William (Arturo Caxiola) (actor); San Francisco, Calif., Dec. 2, 1893.
- GAYNOR, Mitzi (actress); Chicago, Sept. 4.
- GEDDES, Barbara Bel (actress); New York City, Oct. 31, 1922.
- GEDDES, Norman Bel (stage designer); Adrian, Mich., Apr. 27, 1893.
- GEORGE, Grace (actress); New York City, Dec. 25, 1880.
- GERSHWIN, Ira (lyricist); New York City, Dec. 6, 1896.
- GIELGUD, Sir John (actor); London, Eng., Apr. 14, 1904.
- GIGLI, Beniamino (tenor); Rencanati, It., Mar. 20, 1890.
- GILELS, Emil (pianist); Odessa, Ukr., 1916.
- GILES, Warren (baseball executive); Tiskilwa, Ill., May 28, 1896.
- GIMBEL, Bernard F. (merchant); Vincennes, Ind., Apr. 10, 1885.
- GISH, Dorothy (actress); Massillon, Ohio, Mar. 11, 1898.
- GISH, Lillian (actress); Springfield, Ohio, Oct. 14, 1896.
- GLEASON, Jackie (actor); Brooklyn, N. Y., Feb. 26, 1916.
- GLEASON, James (actor); New York City, May 23, 1886.
- GOBEL, George (comedian); Chicago, Ill., May 20, 1920.
- GODDARD, Paulette (actress); Great Neck, N. Y., June 3, 1911.
- GODFREY, Arthur (entertainer); New York City, Aug. 31, 1903.
- GOLDBERG, Rube (Reuben) (cartoonist); San Francisco, Calif., July 4, 1883.
- GOLDWYN, Samuel (Samuel Goldfish) (movie producer); Warsaw, Pol., 1882.
- GOLSCHMANN, Vladimir (orchestra conductor); Paris, Fr., Dec. 16, 1893.
- GOODMAN, Benny (clarinetist); Chicago, Ill., May 30, 1909.
- GOOSSENS, Eugene (orchestra conductor); London, Eng., May 26, 1893.
- GORDON, Max (play producer); New York City, 1892.
- GORDON, Ruth (actress); Wollaston, Mass., Oct. 30, 1896.
- GOSDEN, Freeman F. *See* Amos.
- GOULD, Chester (cartoonist); Pawnee, Okla., 1900.
- GOULD, Morton (composer); Richmond Hill, N. Y., Dec. 10, 1913.
- GRABLE, Betty (actress); St. Louis, Mo., Dec. 18, 1916.
- GRACE, Eugene G. (industrialist); Goshen, N. J., Aug. 27, 1876.
- GRAHAM, Billy (William F.) (evangelist); Charlotte, N. C., Nov. 7, 1918.
- GRAHAM, Martha (choreographer); Pittsburgh, Pa.
- GRAHAME, Gloria (Gloria Grahame Hollward) (actress); Los Angeles, Calif., Nov. 28, 1925.
- GRANGE, Red (Harold) (football player); Forksville, Pa., June 13, 1904.
- GRANGER, Stewart (James Stewart) (actor); May 6, 1913.
- GRANT, Cary (Archibald A. Leach) (actor); Bristol, Eng., Jan. 18, 1904.
- GRAVES, Robert (poet & novelist); London, Eng., July 26, 1895.
- GRAY, Harold (cartoonist); Kankakee, Ill., Jan. 20, 1894.
- GRAYSON, Kathryn (Zelma Hedrick) (actress); Winston-Salem, N. C.
- GRECO, José (dancer); Montorio nei Fren-tani, It., Dec. 23, 1918.
- GREEN, Paul (dramatist); Lillington, N. C., Mar. 17, 1894.
- GREENBERG, Hank (baseball executive); New York City, Jan. 1, 1911.
- GREENE, Graham (novelist); Berkhamstead, Eng., Oct. 2, 1904.
- GRIMM, Charley (baseball manager); St. Louis, Mo., Aug. 28, 1898.
- GRISWOLD, A. Whitney (educator); Morris-town, N. J., Oct. 27, 1906.
- GROFÉ, Ferde (composer); New York City, Mar. 27, 1892.
- GROMYKO, Andrei A. (Soviet statesman); Starye Gromyki, Rus., July 5, 1909.
- GROPIUS, Walter (architect); Berlin, Ger., May 18, 1883.
- GROSZ, George (painter); Berlin, Ger., July 26, 1893.
- GROVE, Lefty (Robert M.) (baseball player); Lonaconing, Md., Mar. 6, 1900.

- GRUENTHER**, Gen. Alfred M. (Supreme Allied Commander, Eur.); Platte Center, Nebr., Mar. 3, 1899.
- GUEST**, Edgar (poet); Birmingham, Eng., Aug. 20, 1881.
- GUINNESS**, Alec (actor); Marylebone, London, Eng., Apr. 2, 1914.
- GUITRY**, Sacha (Alexandre) (actor & movie director); St. Petersburg, Rus., Feb. 21, 1885.
- GUNTHER**, John (journalist & author); Chicago, Ill., Aug. 30, 1901.
- GUSTAVUS VI** (King, Sweden); Stockholm, Swed., Nov. 11, 1882.
- GWENN**, Edmund (actor); London, Eng., Sept. 26, 1877.
- HAakon VII** (King, Norway); Denmark, Aug. 3, 1872.
- HACKETT**, Francis (critic & novelist); Kilkenny, Ire., Jan. 21, 1883.
- HAGEN**, Uta (actress); Göttingen, Ger., June 12, 1919.
- HAGEN**, Walter (golfer); Rochester, N. Y., Dec. 21, 1892.
- HAGERTY**, James C. (Pres. Press Secy., U. S.); Plattsburg, N. Y., May 9, 1909.
- HAILE SELASSIE I** (Emperor, Ethiopia); Ethiopia, July 17, 1891.
- HAMMARSKJÖLD**, Dag (Sec. Gen., U. N.); Jönköping, Swed., July 29, 1905.
- HAMMERSTEIN**, Oscar, II (librettist); New York City, July 12, 1895.
- HAMMETT**, Dashiell (novelist); St. Marys Co., Md., May 27, 1894.
- HAND**, Learned (U. S. jurist); Albany, N. Y., Jan. 27, 1872.
- HANDY**, William C. (blues composer); Florence, Ala., Nov. 16, 1873.
- HANSON**, Howard (composer); Wahoo, Nebr., Oct. 28, 1896.
- HARDWICKE**, Sir Cedric (actor); Lye, Eng., Feb. 19, 1893.
- HARRIDGE**, Will (baseball executive); Chicago, Ill., Oct. 16, 1886.
- HARRIMAN**, W. Averell (Governor, New York); Nov. 15, 1891.
- HARRIS**, Buckey (Stanley R.) (baseball manager); Port Jervis, N. Y., Nov. 8, 1896.
- HARRIS**, Jed (stage producer); Vienna, Aus., Feb. 25, 1900.
- HARRIS**, Julie (actress); Grosse Pointe Park, Mich., Dec. 2, 1925.
- HARRIS**, Phil (band leader); Linton, Ind., June 24, 1906.
- HARRIS**, Roy (composer); Lincoln Co., Okla., Feb. 12, 1898.
- HARRISON**, Rex (actor); Huyton, Eng., Mar. 5, 1908.
- HARSHMAN**, Jack (baseball player); San Diego, Calif., July 12, 1927.
- HART**, Moss (dramatist); New York City, Oct. 24, 1904.
- HATLO**, Jimmy (cartoonist); Providence, R. I., Sept. 1, 1898.
- HATOYAMA**, Ichiro (Japanese statesman); Tokyo, Jap., Jan. 1, 1883.
- HAVOC**, June (June Hovick) (actress); Seattle, Wash.
- HAWKINS**, Jack (actor); London, Eng., Sept. 14.
- HAYES**, Alfred (novelist); London, 1911.
- HAYES**, Helen (Helen Hayes Brown) (actress); Washington, D. C., Oct. 10, 1900.
- HAYES**, Roland (tenor); Curryville, Ga., June 3, 1887.
- HAYMES**, Dick (singer); Argentina.
- HAYWARD**, Leland (theatrical producer); Nebraska City, Nebr., Sept. 13, 1902.
- HAYWARD**, Susan (Edythe Marrener) (actress); Brooklyn, N. Y., June 30, 1919.
- HAYWORTH**, Rita (Margarita Cansino) (actress); New York City, Oct. 17, 1918.
- HEARST**, David W. (publisher); New York City, Dec. 2, 1915.
- HEARST**, John Randolph (publisher); New York City, Sept. 26, 1909.
- HEARST**, Randolph A. (publisher); New York City, Dec. 2, 1915.
- HEARST**, William Randolph, Jr. (publisher); New York City, Jan. 27, 1908.
- HEATIER**, Gabriel (radio commentator); New York City, 1890.
- HECHT**, Ben (novelist & dramatist); New York City, Feb. 28, 1894.
- HEFLIN**, Van (actor); Walters, Okla., Dec. 13, 1910.
- HEIFETZ**, Jascha (violinist); Vilna, Rus., Feb. 2, 1901.
- HELLMAN**, Lillian (dramatist); New Orleans, La., June 20, 1905.
- HEMINGWAY**, Ernest (novelist); Oak Park, Ill., July 21, 1898.
- HENDERSON**, Skitch (pianist); Birmingham, Eng., Jan. 27, 1918.
- HENIE**, Sonja (skater); Oslo, Nor., Apr. 8, 1913.
- HENREID**, Paul (actor); Trieste, Jan. 10, 1908.
- HEPBURN**, Audrey (actress); Brussels, Belg., May 4, 1929.
- HEPBURN**, Katharine (actress); Hartford, Conn., 1909.
- HERBLOCK** (Herbert L. Block) (cartoonist); Chicago, Ill., Oct. 13, 1909.
- HERMAN**, Woody (band leader); Milwaukee, Wis., May 16, 1913.
- HERSEY**, John R. (novelist); Tientsin, China, June 17, 1914.
- HERSHEY**, Lewis B. (U. S. major general); Steuben Co., Ind., Sept. 12, 1893.
- HESS**, Dame Myra (pianist); London, Eng., Feb. 25, 1880.
- HESTON**, Charlton (actor); Evanston, Ill., Oct. 4, 1924.
- HILDEGARDE**, (Hildegard Loretta Sell) (entertainer); Adell, Wis., Feb. 1, 1906.
- HILLER**, Wendy (actress); Bramhall, Eng., Aug. 15, 1912.
- HILLIARD**, Harriet (Peggy Lou Snyder) (actress & singer); Des Moines, Iowa.
- HINDEMITH**, Paul (composer); Hanau, Ger., Nov. 16, 1895.
- HIROHITO** (Emperor, Japan); Japan, Apr. 29, 1901.
- HIRSCH**, Max (horse trainer); Fredericksburg, Tex., July 12, 1880.
- HITCHCOCK**, Alfred J. (movie director); England, Aug. 13, 1899.
- HO CHI MINH** (Vietnam statesman); Annam, Indo-China, c. 1891.
- HOBBY**, Oveta Culp (former Secy. of Welfare U. S.); Killeen, Tex., Jan. 19, 1905.
- HOBSON**, Laura Z. (Laura K. Zametkin) (novelist); New York City.

- HOBSON, Valerie** (actress); Larne, N. Ire., 1918.
- HODGES, Gil** (Gilbert) (baseball player); Princeton, Ind., Apr. 4, 1924.
- HOFFMANN, Josef** (pianist); Cracow, Pol., Jan. 20, 1876.
- HOGAN, Ben** (golfer); Dublin, Tex., Aug. 13, 1912.
- HOLDEN, William** (William Franklin Beedle, Jr.) (actor); O'Fallon, Ill., Apr. 17, 1918.
- HOLLIDAY, Judy** (actress); New York City, June 21, 1923.
- HOLM, Celeste** (actress & singer); New York City, Apr. 29, 1919.
- HOMOLKA, Oscar** (actor); Vienna, Austria, 1901.
- HOOK, Sidney** (philosopher); New York City; Dec. 20, 1902.
- HOOVER, Herbert C.** (U. S. statesman); West Branch, Iowa, Aug. 10, 1874.
- HOOVER, Herbert, Jr.** (Under Secy. of State, U. S.); London, Eng., Aug. 4, 1903.
- HOOVER, J. Edgar** (FBI Director, U. S.); Washington, D. C., Jan. 1, 1895.
- HOPE, Bob** (comedian); London, Eng., May 29, 1903.
- HOPKINS, Miriam** (actress); Bainbridge, Ga., Oct. 13, 1902.
- HOPPE, Willie** (billiards player); Cornwall, N. Y., Oct. 11, 1887.
- HOPPER, Hedda** (columnist); Hollidaysburg, Pa., June 2, 1890.
- HORNE, Lena** (singer) Brooklyn, New York, 1918.
- HORNSBY, Rogers** (baseball manager); Winters, Tex., Apr. 27, 1896.
- HOROWITZ, Vladimir** (pianist); Kiev, Rus., Oct. 1, 1904.
- HORTON, Edward Everett** (actor); Brooklyn, N. Y., Mar. 18, 1886.
- HOUSMAN, Laurence** (dramatist & novelist); Bromsgrove, Eng., July 18, 1865.
- HOWARD, Roy W.** (publisher); Gano, Ohio, Jan. 1, 1883.
- HUBBELL, Carl** (baseball executive); Carthage, Mo., June 22, 1903.
- HUDSON, Rock** (actor); Winnetka, Ill., Nov. 17, 1925.
- HUGHES, Langston** (poet); Joplin, Mo., Feb. 1, 1902.
- HULL, Henry** (actor); Louisville, Ky., Oct. 3, 1890.
- HULL, Josephine** (actress); Newtonville, Mass., Jan. 3, 1886.
- HUMPHREY, George M.** (Secy. of Treasury, U. S.); Cheboygan, Mich., Mar. 8, 1890.
- HUNTER, Kim** (Janet Cole) (actress); Detroit, Mich., Nov. 12, 1922.
- HUNTER, Tab** (actor); New York City, July 11, 1931.
- HUROK, Sol** (Impresario); Pögar, Rus., Apr. 9, 1888.
- HUSSEY, Ruth** (actress); Providence, Rhode Island.
- HUSTON, John** (movie director); Nevada, Mo., Aug. 5, 1906.
- HUTCHINS, Robert M.** (educator); Brooklyn, N. Y., Jan. 17, 1899.
- HUTTON, Barbara** (heiress); New York City, Nov. 14, 1912.
- HUTTON, Betty** (Betty Thornberg) (singer); Battle Creek, Mich., Feb. 26, 1921.
- HUXLEY, Aldous** (novelist); Godalming, Eng., July 26, 1894.
- HUXLEY, Julian S.** (biologist); England, June 22, 1887.
- IBERT, Jacques** (composer); Paris, Fr., Aug. 15, 1890.
- INGE, William** (dramatist); Independence, Kans., May 3, 1913.
- IRELAND, John** (actor); Vancouver, B. C., Can., Jan. 30, 1915.
- ISHERWOOD, Christopher** (novelist); Disley, Cheshire, Eng., Aug. 26, 1904.
- ITURBI, José** (pianist); Valencia, Sp., Nov. 28, 1895.
- IVES, Burl** (folksinger & actor); Hunt, Ill., June 14, 1909.
- JACOBS, Hirsch** (horse trainer); New York City, Apr. 8, 1904.
- JAFFE, Sam** (actor); New York City, Mar. 8, 1898.
- JAGGER, Dean** (actor); Lima, Ohio, Nov. 7, 1903.
- JAMES, Harry** (trumpeter); Albany, Ga., Mar. 15, 1916.
- JAMESON, Margaret Storm** (novelist); Whitby, Eng., 1897.
- JEANMAIRE, Renée** (dancer & actress); Paris, Fr., Apr. 29, 1924.
- JEBB, Sir Gladwyn** (British statesman); England, Apr. 25, 1900.
- JEFFERS, Robinson** (poet); Pittsburgh, Pa., Jan. 10, 1887.
- JESSEL, George** (comedian); New York City, Apr. 3, 1898.
- JESSUP, Philip C.** (U. S. statesman); New York City, Jan. 5, 1897.
- JOHN, Augustus** (painter); Tenby, Wales, Jan. 4, 1879.
- JOHNS, Glynis** (actress); Durban, So. Af., Oct. 5, 1923.
- JOHNSON, Cella** (actress); Richmond, Eng., Dec. 18, 1908.
- JOHNSON, Chick** (Harold) (comedian); Chicago, Ill., Mar. 5, 1895.
- JOHNSON, Vah** (actor); Newport, R. I., Aug. 20, 1916.
- JOHNSTON, Eric A.** (movie executive); Washington, D. C., Dec. 21, 1896.
- JOLIOT-CURIE, Frédéric** (physicist); Paris, Fr., Mar. 19, 1900.
- JONES, Bobby** (golfer); Atlanta, Ga., Mar. 17, 1902.
- JONES, James** (novelist); Robinson, Ill., Nov. 6, 1921.
- JONES, Jennifer** (Phyllis Isley) (actress); Tulsa, Okla., Mar. 2, 1919.
- JONES, Sam** (baseball player); Stewartville, Ohio, Dec. 14, 1925.
- JORDAN, James**, See McGee.
- JORDAN, Marian**, See McGee.
- JORY, Victor** (actor); Dawson, Can., Nov. 23, 1902.
- JOSEPHSON, Matthew** (critic & biographer); Brooklyn, N. Y., Feb. 15, 1899.
- JOURDAN, Louis** (actor); Marseilles, Fr., June 18, 1921.
- JULIANA** (Queen, Netherlands); The Hague, Neth., Apr. 30, 1909.
- JUNG, Carl G.** (psychiatrist); Basel, Switz., July 26, 1875.



- KAISER, Henry J.** (industrialist); Sprout Brook, N. Y., May 9, 1882.
- KALINE, Al** (Albert) (baseball player); Baltimore, Md., Dec. 19, 1934.
- KALTENBORN, Hans V.** (radio commentator); Milwaukee, Wis., July 9, 1878.
- KANIN, Garson** (dramatist & director); Rochester, N. Y., Nov. 24, 1912.
- KANTOR, MacKinlay** (novelist); Webster City, Iowa, Feb. 4, 1904.
- KARLOFF, Boris** (William Henry Pratt) (actor); Dulwich, Eng., Nov. 23, 1887.
- KAUFFMANN, Samuel H.** (publisher); Washington, D. C., Feb. 24, 1898.
- KAUFMAN, George S.** (dramatist); Pittsburgh, Pa., Nov. 16, 1889.
- KAYE, Danny** (David Daniel Kominski) (comedian); Brooklyn, New York, Jan. 18, 1913.
- KAYE, Nora** (Nora Koreff) (ballerina); New York City, 1920.
- KAYE, Sammy** (band leader); Cleveland, Ohio, Mar. 13, 1910.
- KAZAN, Elia** (movie & stage director); Constantinople, Turk., Sept. 7, 1909.
- KEATON, Buster** (comedian); Piqua, Kans., Oct. 4, 1896.
- KEEL, Howard** (singer & actor); Gillespie, Ill.
- KEFAUVER, Estes** (U. S. legislator); Madisonville, Tenn., July 26, 1903.
- KELLAND, Clarence** (novelist); Portland, Mich., July 11, 1881.
- KELLER, Helen** (author & social worker); Tuscumbia, Ala., June 27, 1880.
- KELLY, Emmett** (circus clown); Sedan, Kans., 1898.
- KELLY, Gene** (actor); Pittsburgh, Pa., Aug. 23, 1912.
- KELLY, Grace** (actress); Philadelphia, Pa., Nov. 12, 1929.
- KELLY, Walt** (cartoonist); Philadelphia, Pa., Aug. 25, 1913.
- KENNAN, George F.** (U. S. foreign service officer); Milwaukee, Wis., Feb. 16, 1904.
- KENNEDY, Arthur** (actor); Worcester, Mass., Feb. 17, 1914.
- KENNEDY, Margaret** (novelist); London, Eng., 1896.
- KENT, Rockwell** (painter); Tarrytown Heights, N. Y., June 21, 1882.
- KERENSKY, Alexander** (former Russian Premier); Simbirsk, Rus., 1881.
- KERR, Deborah** (actress); Helensburgh, Scot., Sept. 30, 1921.
- KETTERING, Charles F.** (engineer); nr. Loudonville, Ohio, Aug. 29, 1876.
- KEYES, Frances** (novelist); Univ. of Va., July 21, 1885.
- KHACHATURIAN, Aram** (composer); Tiflis, Rus., June 6, 1903.
- KHRUSHCHEV, Nikita S.** (Soviet statesman); Kalinovka, Rus., Apr. 17, 1894.
- KIEPURA, Jan** (tenor); Sosnowiec, Pol., May 16, 1902.
- KIERAN, John** (author); New York City, Aug. 2, 1892.
- KILGALLAN, Dorothy** (columnist); Chicago, Ill., July 3, 1913.
- KILPATRICK, John** (sports executive); New York City, June 15, 1889.
- KINER, Ralph** (baseball player); Santa Rita, N. Mex., Oct. 27, 1922.
- KING, Dennis** (actor); Coventry, Eng., Nov. 2, 1897.
- KING, Henry** (movie director); Christianburg, Va., Jan. 24, 1896.
- KINGSLEY, Sidney** (Sidney Kirschner) (dramatist); New York City, Oct. 18, 1906.
- KIPNIS, Alexander** (basso); Ukraine, Feb. 1, 1896.
- KIRK, Lisa** (singer); Charleroi, Pa.
- KIRKPATRICK, Ralph** (harpsichordist); Leominster, Mass., June 10, 1911.
- KIRSTEN, Dorothy** (soprano); Montclair, N. J., July 6, 1919.
- KITT, Eartha** (singer & actress); North, S. C., Jan. 26, 1928.
- KLEMPERER, Otto** (orchestra conductor); Breslau, Ger., 1885.
- KLUSZEWSKI, Ted** (Theodore) (baseball player); Argo, Ill., Sept. 10, 1924.
- KNIGHT, John S.** (publisher); Bluefield, W. Va., Oct. 26, 1894.
- KODÁLY, Zoltán** (composer); Kecskemét, Hung., Dec. 16, 1882.
- KOESTLER, Arthur** (novelist); Budapest, Hung., Sept. 5, 1905.
- KOKOSCHKA, Oskar** (painter); Pöchlarn, Aus., Mar. 1, 1886.
- KOSTELANETZ, Andre** (orchestra conductor); Petrograd, Rus., Dec. 22, 1901.
- KOVACS, Ernie** (comedian); Trenton, N. J., Jan. 23, 1919.
- KRAMER, John A.** (tennis player); Las Vegas, Nev., Aug. 1, 1921.
- KRAMER, Stanley E.** (movie producer); New York City, Sept. 29, 1913.
- KREISLER, Fritz** (violinist); Vienna, Aus., Feb. 2, 1875.
- KROCK, Arthur** (journalist); Nov. 16, 1886.
- KROLL, Leon** (painter); New York City, Dec. 6, 1884.
- KRUGER, Otto** (actor); Toledo, Ohio, Sept. 6, 1885.
- KRUPA, Gene** (drummer & band leader); Chicago, Ill., Jan. 15, 1909.
- KUBELIK, Rafael** (orchestra conductor); Bychory, Bohemia, June 29, 1914.
- KUCKS, John** (baseball player); Hoboken, N. J., Jan. 27, 1933.
- KUENN, Harvey** (baseball player); Milwaukee, Wis., Dec. 4, 1930.
- KULLMAN, Charles** (tenor); New Haven, Conn., Jan. 13, 1903.
- KURTZ, Efreim** (orchestra conductor); St. Petersburg, Rus., Nov. 7, 1900.
- LABINE, Clem** (Clement) (baseball player); Lincoln, R. I., Aug. 6, 1926.
- LADD, Alan** (actor); Hot Springs, Ark., Sept. 3, 1913.
- LA FARGE, Oliver** (author & anthropologist); New York City, Dec. 19, 1901.
- LAHR, Bert** (Irving Lahrmann) (comedian); New York City, Aug. 13, 1895.
- LAINE, Frankie** (singer); Chicago, Ill., Mar. 30, 1913.
- LAKE, Veronica** (Constance Keane) (actress); Lake Placid, N. Y., Nov. 14, 1919.
- LAMARR, Hedy** (actress); Vienna, Aus.
- LAMAS, Fernando** (actor); Buenos Aires, Arg. Jan. 9.

- LAMBEAU, Curly (E. L.)** (football coach); Green Bay, Wis., Apr. 9, 1898.
- LAMOUR, Dorothy** (actress); New Orleans, La., Dec. 10, 1914.
- LANCASTER, Burt** (actor); New York City, Nov. 2, 1913.
- LANCHESTER, Elsa** (Elsa Sullivan) (actress); London, Eng., Oct. 28, 1902.
- LANDOWSKA, Wanda** (Harpischordist); Warsaw, Pol., July 5, 1877.
- LANDY, John** (mile runner); Australia, Apr. 4, 1930.
- LANG, Fritz** (movie director); Vienna, Aus., Dec. 5, 1890.
- LANG, Harold** (dancer & actor); San Francisco, Calif.
- LANZA, Mario** (Alfredo Arnold Cocozza) (tenor); So. Philadelphia, Pa., Jan. 31, 1921.
- LA ROSA, Julius** (singer); Brooklyn, N. Y., Jan. 2, 1930.
- LAUGHTON, Charles** (actor); Scarborough, Eng., July 1, 1899.
- LAWFORD, Peter** (actor); London, Eng., Sept. 7, 1923.
- LAWRENCE, Brooks** (baseball player); Springfield, Ohio, Jan. 30, 1925.
- LAWRENCE, David** (journalist); Philadelphia, Pa., Dec. 25, 1888.
- LAWRENCE, Marjorie** (soprano); Deans Marsh, Austr., Feb. 17, 1909.
- LEAF, Munro** (children's writer); Hamilton, Md., Dec. 4, 1905.
- LEAHY, Frank** (football coach); O'Neill, Nebr., Aug. 21, 1908.
- LE CORBUSIER** (Charles-Édouard Jeanneret) (architect); La Chaux De Fonds, Switz., Oct. 6, 1887.
- LEE, Gypsy Rose** (Rose Hovik) (entertainer); Seattle, Wash., Feb. 9, 1914.
- LEE, Peggy** (singer); Jamestown, N. Dak., 1921.
- LE GALLIENNE, Eva** (actress & director); London, Eng., Jan. 11, 1899.
- LEHMANN, Lotte** (soprano); Perleberg, Ger., July 2, 1885.
- LEIGH, Janet** (Jeanette Morrison) (actress); Merced, Calif., July 6, 1927.
- LEIGH, Vivien** (Vivian Hartley) (actress); Darjeeling, India, Nov. 5, 1913.
- LEINSDORF, Erich** (orchestra conductor); Vienna, Aus., Feb. 4, 1912.
- LEMON, Bob** (baseball player); San Bernardino, Calif., Sept. 22, 1920.
- LEMON, Jim** (baseball player); Covington, Va., Mar. 23, 1928.
- LENER, Alan Jay** (librettist); New York City, Aug. 31, 1918.
- LENER, Max** (social writer); Minsk, Rus., Dec. 20, 1902.
- LE ROY, Mervyn** (movie producer & director); San Francisco, Calif., Oct. 15, 1900.
- LEVANT, Oscar** (pianist); Pittsburgh, Pa., Dec. 27, 1906.
- LEVENE, Sam** (actor); New York City, 1907.
- LEVI, Carlo** (novelist); Turin, It., 1902.
- LEVIN, Herman** (theatrical producer); Philadelphia, Pa., Mar. 1, 1908.
- LEWIS, Fulton, Jr.** (columnist); Washington, D. C., Apr. 30, 1903.
- LEWIS, Jerry** (comedian); Newark, N. J., Mar. 16, 1926.
- LEWIS, Joe E.** (comedian); New York City, Feb. 12, 1880.
- LEWIS, John L.** (labor leader); Lucas, Iowa, Feb. 12, 1880.
- LIBERACE** (Wladziu Liberace) (pianist); West Allis, Wis., May 16, 1919.
- LIE, Trygve** (former U. N. Secretary General); Oslo, Nor., July 16, 1896.
- LILIENTHAL, David E.** (U. S. statesman); Morton, Ill., July 8, 1899.
- LILLIE, Beatrice** (actress); Toronto, Can., May 29, 1898.
- LIN Yutang** (philosopher); Changchow, China, Oct. 10, 1895.
- LINDBERGH, Charles A.** (aviator); Detroit, Mich., Feb. 4, 1902.
- LINDSAY, Howard** (dramatist); Waterford, N. Y., Mar. 29, 1889.
- LINKLETTER, Art** (actor); Moose Jaw, Sask., Can., July 17, 1912.
- LIPCHITZ, Jacques** (sculptor); Druskieniki, Lith., Aug. 22, 1891.
- LIPPMANN, Walter** (author & journalist); New York City, Sept. 23, 1889.
- LITTLE, Lou** (football coach); Leominster, Mass., Dec. 6, 1893.
- LIVESY, Roger** (actor); Barry, Wales, June 25, 1906.
- LLEWELLYN, Richard** (novelist); St. David's, Wales.
- LLOYD, Harold** (comedian); Burchard, Nebr., Apr. 20, 1894.
- LOCKHART, Gene** (actor); London, Can., July 25, 1892.
- LOCKWOOD, Margaret** (actress); Karachi, India, 1916.
- LODGE, Henry Cabot, Jr.** (U. N. Delegate, U. S.); Nahant, Mass., July 5, 1902.
- LOESSER, Frank** (song writer); New York City, June 29, 1910.
- LOEWE, Frederick** (song writer); Vienna, Aus., June 10, 1904.
- LOGAN, Joshua** (director & dramatist); Texarkana, Tex., Oct. 5, 1908.
- LOLOBRIGIDA, Gina** (actress); Subiaco, It., 1928.
- LOMBARDO, Guy** (band leader); London, Can., June 19, 1902.
- LOOS, Anita** (novelist); Sisson, Calif., Apr. 26, 1893.
- LOPEZ, Al** (baseball manager); Tampa, Fla., Aug. 20, 1908.
- LOPEZ, Hector** (baseball player); Colón, Panamá, July 8, 1932.
- LOPEZ, Vincent** (band leader); Brooklyn, N. Y., Dec. 10, 1898.
- LORRE, Peter** (actor); Rosenberg, Hung., June 26, 1904.
- LOUIS, Joe** (Joe Louis Barrow) (boxer); Lexington, Ala., May 13, 1914.
- LOVEJOY, Frank** (actor); New York City, Mar. 28.
- LOW, David** (cartoonist); Dunedin, N. Z., Apr. 7, 1891.
- LOWELL, Robert** (poet); Boston, Mass., Mar. 1, 1917.
- LOY, Myrna** (Myrna Williams) (actress); near Helena, Mont., Aug. 2, 1905.
- LUCE, Clare Boothe** (U. S. diplomat); New York City, Apr. 10, 1903.
- LUCE, Henry R.** (publisher); Shantung, China, Apr. 3, 1898.
- LUKAS, Paul** (actor); Budapest, Hung., May 26, 1895.

- LUND, John (actor); Rochester, N. Y., Feb. 6, 1914.
- LUNT, Alfred (actor); Milwaukee, Wis., Aug. 19, 1893.
- LUPINO, Ida (actress); London, Eng., Feb. 4, 1918.
- LYNN, Diana (Dolly Loehr) (actress); Los Angeles, Calif., Oct. 7, 1926.
- MacARTHUR, Douglas (U. S. general); Little Rock Barracks, Ark., Jan. 26, 1880.
- MacDONALD, Jeanette (soprano); Philadelphia, Pa., June 18, 1907.
- MacGRATH, Leueen (actress & dramatist); London, Eng., July 3, 1914.
- MacLEISH, Archibald (poet); Glencoe, Ill., May 7, 1892.
- MacRAE, Gordon (singer); East Orange, N. J., Mar. 12, 1921.
- MADISON, Guy (Robert Moseley) (actor); Bakersfield, Calif., Jan. 19, 1922.
- MAGLIE, Sal (Salvatore) (baseball player); Niagara Falls, N. Y., Apr. 26, 1917.
- MAGNANI, Anna (actress); Alexandria, Egy., 1910.
- MAGSAYSAY, Ramón (President, Philippines); Iba, Luzon, Aug. 31, 1907.
- MAILER, Norman (novelist); Long Branch, N. J., Jan. 31, 1923.
- MAIN, Marjorie (actress); Acton, Ind., Feb. 24, 1890.
- MALAN, Daniel F. (So. African statesman); Riebeek West. So. Af., May 22, 1874.
- MALENKOV, Georgi M. (Soviet statesman); Orenburg, Rus., Jan. 8, 1902.
- MALIK, Yakov (Soviet diplomat); Kharkov, Ukr., 1906.
- MALRAUX, André (novelist); Paris, Fr., Nov. 3, 1895.
- MANGANO, Silvana (actress); Rome, It.
- MANGRUM, Lloyd (golfer); Dallas, Tex., Aug. 1, 1914.
- MANKIEWICZ, Joseph L. (movie director); Wilkes-Barre, Pa., Feb. 11, 1909.
- MANTLE, Mickey (baseball player); Spavina, Okla., Oct. 20, 1931.
- MAO Tse-tung (Chmn. of People's Council, Comm. China); Shao Shan, China, 1893.
- MARBLE, Alice I. (tennis player); Plumas Co., Calif., Sept. 28, 1913.
- MARCH, Fredric (Frederick Bickel) (actor); Racine, Wis., Aug. 31, 1897.
- MARCH, Hal (Harold Mendelson) (actor); San Francisco, Calif., Apr. 22, 1920.
- MARCIANO, Rocky (Rocco Francis Marchegiano) (boxer); Brockton, Mass., Sept. 1, 1924.
- MARGO (Maria Boldao y Castilla) (actress); Mexico City, Mex., May 10, 1918.
- MARION, Marty (baseball manager); Richburg, S. C., Dec. 1, 1917.
- MARITAIN, Jacques (philosopher); Paris, Fr., Nov. 18, 1882.
- MARKOVA, Alicia (ballerina); London, Eng., Dec. 1, 1910.
- MARQUAND, John P. (novelist); Wilmington, Del., Nov. 10, 1893.
- MARSHALL, Catherine (author); Johnson City, Tenn., Sept. 27, 1914.
- MARSHALL, George C. (U. S. general); Uniontown, Pa., Dec. 31, 1880.
- MARSHALL, Herbert (actor); London, Eng., May 23, 1890.
- MARSHALL, Thurgood (lawyer); Baltimore, Md., July 2, 1908.
- MARTIN, Dean (comedian); Steubenville, Ohio, June 7, 1917.
- MARTIN, Joseph W., Jr. (U. S. Representative, Mass.); No. Attleboro, Mass., Nov. 3, 1884.
- MARTIN, Mary (actress); Weatherford, Tex., Dec. 1, 1914.
- MARTIN, Tony (actor & singer); San Francisco, Calif., Dec. 25, 1914.
- MARTIN, William McChesney, Jr. (financial executive); St. Louis, Mo., Dec. 17, 1906.
- MARTINELLI, Giovanni (tenor); Montagnana, It., Oct. 22, 1885.
- MARTINU, Bohuslav (composer); Policka, Bohemia, Dec. 8, 1890.
- MARX, Chico (Leonard) (comedian); New York City, Mar. 22, 1891.
- MARX, Groucho (Julius) (comedian); New York City, Oct. 2, 1895.
- MARX, Harpo (Arthur) (comedian); New York City, Nov. 23, 1893.
- MASEFIELD, John (poet); Ledbury, Eng., June 1, 1878.
- MASON, F. van Wyck (novelist); Boston, Mass., Nov. 11, 1901.
- MASON, James (actor); Huddersfield, Eng., May 15, 1909.
- MASSEY, Ilona (Ilona Hajmassy) (actress); Hungary, 1910.
- MASSEY, Raymond (actor); Toronto, Can., Aug. 30, 1896.
- MASSINE, Léonide (choreographer); Moscow, Rus., Aug. 9, 1896.
- MATHIAS, Bob (athlete); Tulare, Calif., Nov. 17, 1930.
- MATTHEWS, Ed (Edwin) (baseball player); Texarkana, Tex., Oct. 13, 1931.
- MATURE, Victor (actor); Louisville, Ky., Jan. 19, 1916.
- MAUGHAM, William Somerset (novelist); Paris, Fr., Jan. 25, 1874.
- MAULDIN, William H. (cartoonist); Mount Park, N. Mex., Oct. 29, 1921.
- MAUROIS, André (Émile Herzog) (novelist); Elbeuf, Fr., July 26, 1885.
- MAXWELL, Elsa (columnist); Keokuk, Iowa, May 24, 1883.
- MAYER, Louis B. (movie producer); Minneapolis, Minn., July 4, 1885.
- MAYNOR, Dorothy (soprano); Norfolk, Va., Sept. 3, 1910.
- MAYO, Virginia (Virginia Jones) (actress); St. Louis, Mo., Nov. 30, 1920.
- MAYS, Willie (baseball player); Fairfield, Ala., May 6, 1931.
- McBRIDE, Mary Margaret (author); Paris, Mo., Nov. 16, 1899.
- McCAMBRIDGE, Mercedes (actress); Joliet, Ill., Mar. 17, 1918.
- McCAREY, Leo (movie director); Los Angeles, Calif., Oct. 3, 1898.
- McCARHY, Joe (baseball manager); Philadelphia, Pa., Apr. 21, 1887.
- McCLOY, John J. (lawyer); Philadelphia, Pa., Mar. 31, 1895.
- McCREA, Joel (actor); Los Angeles, Calif., Nov. 5, 1906.
- McCULLERS, Carson (author); Columbus, Ga., Feb. 19, 1917.
- McDONALD, David J. (labor leader); Pittsburgh, Pa., Nov. 22, 1902.



- McGEE, Fibber (James Jordan) (actor); Peoria, Ill., Nov. 16, 1896.
- McGEE, Molly (Marian Jordan) (actress); Peoria, Ill., Apr. 15, 1898.
- McGUIRE, Dorothy (actress); Omaha, Nebr., June 14, 1919.
- McLAGLEN, Victor (actor); Tunbridge Wells, Eng., Dec. 11, 1886.
- MEANY, George (labor leader); New York City, Aug. 16, 1894.
- MEDINA, Harold R. (U. S. jurist); Brooklyn, N. Y., Feb. 16, 1888.
- MEEKER Ralph (Ralph Rathgeber) (actor); Minneapolis, Minn., Nov. 21, 1920.
- MEIER, Golda (Golda Myerson) (Israeli statesman); Kiev, Rus.
- MEITNER, Lise (physicist); Vienna, Aus., Nov. 7, 1878.
- MELCHIOR, Lauritz (tenor); Copenhagen, Den., Mar. 20, 1890.
- MELTON, James (tenor); Moultrie, Ga., Jan. 2, 1904.
- MENDÈS-FRANCE, Pierre (French statesman); Paris, Fr., Jan. 11, 1905.
- MENJOU, Adolphe (actor); Pittsburgh, Pa., Feb. 18, 1890.
- MENOTTI, Gian-Carlo (composer); Cadegliano, It., July 7, 1911.
- MENUHIN, Yehudi (violinist); New York City, Apr. 22, 1916.
- MENZIES, Robert Gordon (Prime Minister, Australia); Jeparit, Australia, Dec. 20, 1894.
- MERCER, Johnny (singer & song writer); Savannah, Ga., Nov. 18, 1909.
- MEREDITH, Burgess (actor); Cleveland, Ohio, Nov. 16, 1908.
- MERMAN, Ethel (Ethel Zimmermah) (actress & singer); Astoria, New York, Jan. 16, 1909.
- MERRILL, Robert (baritone); Brooklyn, N. Y., June 4, 1919.
- MERTON, Thomas (poet & religious writer); Prades, Fr., Jan. 31, 1915.
- MESTROVIČ, Ivan (sculptor); Vipolje, Yugos., Aug. 15, 1883.
- MEYER, Eugene (publisher); Los Angeles, Calif., Oct. 31, 1875.
- MICHENER, James A. (novelist); New York City, Feb. 3, 1907.
- MIDDLECOFF, Cary (golfer); Halls, Tenn., Jan. 6, 1921.
- MIELZINER, Jo (stage designer); Paris, Fr., Mar. 19, 1901.
- MILANOV, Zinka (soprano); Zagreb, Yugos., May 17, 1908.
- MILHAUD, Darius (composer); Aix-en-Provence, Fr., Sept. 4, 1892.
- MILLAND, Ray (Jack Millane) (actor); Neath, Wales, Jan. 3, 1907.
- MILLER, Arthur (dramatist); New York City, 1915.
- MILLER, Gilbert (theatrical producer); New York City, July 3, 1884.
- MILSTEIN, Nathan (violinist); Odessa, Russ., Dec. 31, 1904.
- MINTON, Sherman (former U. S. jurist); Georgetown, Ind., Oct. 20, 1890.
- MIRÓ, Joan (painter); Barcelona, Sp., Apr. 21, 1893.
- MITCHELL, James P. (Secy. of Labor, U. S.); Elizabeth, N. J., Nov. 12, 1902.
- MITCHELL, Millard (actor); Havana, Cuba, 1903.
- MITCHELL, Thomas (actor); Elizabeth, N. J., July 11, 1895.
- MITCHUM, Robert (actor); Rising Sun, Del.
- MITROPOULOS, Dimitri (orchestra conductor); Athens, Gr., Feb. 18, 1896.
- MOISEWITSCH, Benno (pianist); Odessa, Rus., Feb. 22, 1890.
- MOLLET, Guy (French statesman); Fiers, Orne, Fr., Dec. 31, 1905.
- MOLOTOV, Vyacheslav M. (V. M. Skryabin) (Soviet statesman); Kukarka, Rus., Mar. 9, 1890.
- MONROE, Marilyn (Norma Daugherty) (actress); Los Angeles, June 1, 1928.
- MONROE, Vaughn (band leader); Akron, Ohio, Oct. 7, 1912.
- MONSARRAT, Nicholas (novelist); Liverpool, Eng., Mar. 22, 1910.
- MONTEUX, Pierre (orchestra conductor); Paris, Fr., Apr. 4, 1875.
- MONTGOMERY, Robert (Henry, Jr.) (actor); Beacon, N. Y., May 21, 1904.
- MOORE, Archie (boxer); Collinsville, Ill., Dec. 13, 1916.
- MOORE, Garry (Thomas Garrison Morfit) (comedian); Baltimore, Md., Jan. 31, 1915.
- MOORE, Henry (sculptor); Castleford, Eng., July 30, 1898.
- MOORE, Marianné (poet); Kirkwood, Mo., Nov. 15, 1887.
- MOORE, Terry (Helen Koford) (actress); Los Angeles, Calif., Jan. 7, 1929.
- MOORE, Victor (actor); Hammononton, N. J., Feb. 24, 1876.
- MOOREHEAD, Agnes (actress); Clinton, Mass., Dec. 6, 1906.
- MORGAN, Michele (Simone Roussel) (actress); Paris, Fr., Feb. 29, 1920.
- MORINI, Erica (violinist); Vienna, Aus., Jan. 5, 1910.
- MORLEY, Christopher (novelist); Haverford, Pa., May 5, 1890.
- MORLEY, Robert (actor); Wiltshire, Eng., May 26, 1908.
- MOSES, Grandma (Anna Mary Robertson) (painter); Greenwich, N. Y., Sept. 7, 1860.
- MOSES, Robert (NYC public official); New Haven, Conn., Dec. 18, 1888.
- MOSSADEGH, Mohammed (Iranian statesman); Teheran, Persia, 1880(?).
- MULLOY, Gardnar (tennis player); Miami, Fla., Nov. 22, 1914.
- MUMFORD, Lewis (author); Flushing, N. Y., Oct. 19, 1895.
- MUNCH, Charles (orchestra conductor); Strasbourg, Ger., Sept. 1891.
- MUNI, Paul (Muni Weisenfreund) (actor); Lemberg, Aus., Sept. 22, 1895.
- MUNSEL, Patrice (soprano); Spokane, Wash., May 14, 1925.
- MURPHY, George (actor); New Haven, Conn., July 4, 1904.
- MURRAY, Arthur (dancing teacher); New York City, Apr. 4, 1895.
- MURRAY, Ken (Don Court) (actor); New York City, July 14, 1903.
- MURROW, Edward R. (radio commentator); Greensboro, N. C.
- MUSIAL, Stan (baseball player); Donora, Pa., Nov. 21, 1920.

- NAGURSKI**, Bronko (football player); International Falls, Minn., Nov. 3, 1908.
- NAISH**, J. Carol (actor); New York City, Jan. 21, 1900.
- NASH**, Ogden (poet); Rye, N. Y., Aug. 19, 1902.
- NASSER**, Gamal Abdel (Premier, Egypt); Egypt, c.1918.
- NATHAN**, George Jean (theater critic); Ft. Wayne, Ind., Feb. 14, 1882.
- NATHAN**, Robert (novelist); New York City, Jan. 2, 1894.
- NATWICK**, Mildred (actress); Baltimore, Md., June 19, 1908.
- NEAGLE**, Anna (Marjorie Robertson) (actress); nr. London, Eng., Oct. 20, 1904.
- NEGRI**, Pola (Appollonia Chalupec) (actress); Lipno, Pol., 1899.
- NEHRU**, Jawaharlal (Prime Minister, India); Allahabad, India, Nov. 14, 1889.
- NELSON**, Ozzle (Oswald) (band leader); Jersey City, N. J., 1906.
- NENNI**, Pietro (Italian Socialist leader); Faenza, It., Feb. 9, 1891.
- NEVINS**, Allan (historian); Camp Point, Ill., May 20, 1890.
- NEWCORBE**, Don (baseball player); Madison, N. J., July 14, 1926.
- NEWHOUSE**, Samuel I. (newspaperman); New York City, May 24, 1895.
- NGO DINH DIEM** (Vietnam statesman); Quang Binh, Annam, 1901.
- NIEBUHR**, Reinhold (theologian); Wright City, Mo., June 21, 1892.
- NIVEN**, David (actor); Scotland.
- NIXON**, Richard M. (Vice President, U. S.); Yorba Linda, Calif., Jan. 9, 1913.
- NOGUCHI**, Isamu (sculptor); Los Angeles, Calif., Nov. 7, 1904.
- NOLAN**, Lloyd (actor); San Francisco, Calif.
- NORRIS**, Kathleen (novelist); San Francisco, Calif., July 16, 1880.
- NOVAES**, Gulomar (pianist); São João de Boa Vista, Braz., Feb. 28, 1895.
- NOVAK**, Kim (Marilyn Novak) (actress); Feb. 13, 1933.
- NOVOTNA**, Jarmila (soprano); Prague, Bohemia, Sept. 23, 1911.
- NOYES**, Alfred (poet); Wolverhampton, Eng., Sept. 16, 1880.
- NUGENT**, Elliott (actor & director); Dover, Ohio, Sept. 20, 1899.
- NUXHALL**, Joe (baseball player); Hamilton, Ohio, July 30, 1928.
- OBBERON**, Merle (Merle O'Brien Thompson) (actress); Tasmania, Feb. 19, 1911.
- O'BRIEN**, Edmond (actor); New York City, Sept. 10, 1915.
- O'BRIEN**, Margaret (actress); San Diego, Calif., Jan. 15, 1937.
- O'BRIEN**, Pat (actor); Milwaukee, Wis., Nov. 11, 1899.
- O'CASEY**, Sean (dramatist); Dublin, Ire., 1881.
- O'CONNOR**, Donald (actor); Chicago, Ill., Aug. 28, 1925.
- ODETS**, Clifford (dramatist); Philadelphia, Pa., July 18, 1906.
- O'FAOLAIN**, Seán (story writer); Cork, Ire., Feb. 22, 1900.
- O'FLAHERTY**, Liam (novelist); Aran Is., Ire., 1897.
- O'HARA**, John (novelist); Pottsville, Pa., Jan. 31, 1905.
- O'HARA**, Maureen (Maureen FitzSimons) (actress); Milltown, Ire., Aug. 17, 1921.
- OISTRACH**, David (violinist); Odessa, Russ., 1908.
- O'KEEFFE**, Georgia (painter); Sun Prairie, Wis., Nov. 15, 1887.
- O'KELLY**, Seán T. (President, Ireland); Dublin, Ire., Aug. 25, 1882.
- OLIVIER**, Sir Laurence (actor); Dorking, Eng., May 22, 1907.
- OLSEN**, Ole (John) (comedian); Wabash, Ind., Nov. 6, 1892.
- OPPENHEIMER**, J. Robert (physicist); New York City, Apr. 22, 1904.
- ORMANDY**, Eugene (orchestra conductor); Budapest, Hung., Nov. 18, 1899.
- O'SULLIVAN**, Maureen (actress); Boyle, Ire., May 17, 1911.
- OTT**, Mel (Melvin T.) (baseball player); Gretna, La., Mar. 2, 1909.
- OWENS**, Jesse (sprinter); Decatur, Ala., Sept. 12, 1913.
- PAGE**, Patti (Clara Ann Fowler) (singer); Claremore, Okla., 1927.
- PALANCE**, Jack (actor); Latimer, Pa., Feb. 18, 1920.
- PALEY**, William S. (broadcasting executive); Chicago, Ill., Sept. 28, 1901.
- PALMER**, Lilli (actress); Posen, Germany, May 27, 1917.
- PARKER**, Dorothy (poet & story writer); West End, N. J., Aug. 22, 1893.
- PARKER**, Eleanor (actress); Cedarville, Ohio, June 26, 1922.
- PARKER**, Fess (actor); Ft. Worth, Tex., Aug. 16, 1927.
- PARSONS**, Louella O. (columnist); Freeport, Ill., Aug. 6, 1893.
- PASTERNAK**, Joseph (movie producer); Simleu-Silvaniei, Rum., Sept. 19, 1901.
- PATON**, Alan (novelist); Pietermaritzburg, So. Af., Jan. 11, 1903.
- PAUL I** (King, Greece); Athens, Gr., Dec. 14, 1901.
- PAUL**, Elliot (novelist); Malden, Mass., Feb. 13, 1891.
- PAULING**, Linus Carl (chemist); Portland, Oreg., Feb. 28, 1901.
- PEALE**, Norman Vincent (clergyman & author); Bowersville, Ohio, May 31, 1898.
- PEARSON**, Drew (columnist); Evanston, Ill., Dec. 13, 1897.
- PEARSON**, Hesketh (author); Hawford, Worcs., Eng., Feb. 20, 1887.
- PEARSON**, Lester B. (Canadian statesman); Toronto, Ont., Can., Apr. 23, 1897.
- PEATTIE**, Donald Culross (nature writer); Chicago, Ill., June 21, 1898.
- PECK**, Gregory (actor); La Jolla, Calif., Apr. 5, 1916.
- PEERCE**, Jan (Jacob Pincus Perelmuth) (tenor); New York City, 1904.
- PEGLER**, Westbrook (columnist); Minneapolis, Minn., Aug. 2, 1894.
- PERELMAN**, S. J. (Sidney J.) (humorist); Brooklyn, N. Y., Feb. 1, 1904.

- PERÓN, Juan D.** (former President, Argentina); nr. Lobos, Arg., Oct. 8, 1895.
- PETERS, Roberta** (Roberta Peterman) (soprano); New York City, May 4, 1930.
- PETRI, Egon** (pianist); Hanover, Ger., Mar. 23, 1881.
- PETRILLO, James C.** (labor leader); Chicago, Ill., Mar. 16, 1892.
- PHILIP** (Philip Mountbatten) (Duke of Edinburgh); Corfu, June 10, 1921.
- PIATIGORSKY, Gregor** (cellist); Ekaterino-slav, Russ., Apr. 17, 1903.
- PICASSO, Pablo** (painter); Málaga, Sp., Oct. 25, 1881.
- PICCARD, Auguste** (physicist); Basel, Switz., Jan. 28, 1884.
- PICCARD, Jean Félix** (aeronautics engineer); Basel, Switz., Jan. 28, 1884.
- PICKFORD, Mary** (Gladys Mary Smith) (actress); Toronto, Can., Apr. 8, 1893.
- PIDGEON, Walter** (actor); East St. John, Can., Sept. 23, 1898.
- PIERCE, Bill** (baseball player); Detroit, Mich., Apr. 2, 1927.
- PINAY, Antoine** (French statesman); St.-Symphorien-sur-Colse, France, Dec. 30, 1891.
- PINEAU, Christian** (French statesman); Chaumont-en-Bassigny, Fr., Oct. 14, 1904.
- PINZA, Ezio** (basso); Rome, It., May 18, 1892.
- PISTON, Walter** (composer); Rockland, Maine, Jan. 20, 1894.
- PITTS, Zasu** (actress); Parsons, Kans., Jan. 3, 1898.
- PUS XII** (Eugenio Pacelli) (Pope); Rome, It., Mar. 2, 1876.
- PODRES, Johnny** (baseball player); Witherbee, N. Y., Sept. 30, 1932.
- POHOLSKI, Tom** (baseball player); Detroit, Mich., Aug. 26, 1929.
- PONS, Lily** (soprano); Cannes, Fr., Apr. 13, 1904.
- PONSELLE, Rosa** (soprano); Meriden, Conn., Jan. 22, 1897.
- PORTER, Cole** (song writer); Peru, Ind., June 9, 1893.
- PORTER, Katherine Anne** (story writer); Indian Creek, Tex., May 15, 1894.
- PORTERFIELD, Bob** (baseball player); Newport, Va., Aug. 10, 1924.
- POST, Emily** (author on etiquette); Baltimore, Md., Oct. 3, 1873.
- POULENC, Francis** (composer); Paris, Fr., Jan. 7, 1899.
- POUND, Ezra** (poet); Hailey, Idaho, Oct. 30, 1885.
- POWELL, Dick** (actor); Mt. View, Ark., Nov. 14, 1904.
- POWELL, Jane** (Suzanne Burce) (actress); Portland, Oreg., Apr. 1, ??.
- POWELL, William** (actor); Pittsburgh, Pa., July 29, 1892.
- POWER, Tyrone** (actor); Cincinnati, Ohio, May 5, 1914.
- PREMINGER, Otto** (movie producer & director); Vienna, Aus., Dec. 5, 1906.
- PRESELEY, Elvis** (singer); Tupelo, Miss., Jan. 8, 1935.
- PRICE, George** (cartoonist); Coytesville, N. J., June 9, 1901.
- PRICE, Vincent** (actor); St. Louis, Mo., May 27, 1911.
- PRIESTLEY, J. B.** (John B.) (novelist & dramatist); Bradford, Eng., Sept. 13, 1894.
- PRIMROSE, William** (violinist); Glasgow, Scot., Aug. 23, 1904.
- PRIMUS, Pearl** (dancer); Trinidad, B. W. I., Nov. 29, 1921.
- PUSEY, Nathan M.** (educator); Council Bluffs, Iowa, Apr. 4, 1907.
- QUEUILLE, Henri** (French statesman); Neuville d'Ussel, Fr., Mar. 31, 1884.
- QUINN, Anthony** (actor); Chihuahua, Mex., Apr. 21, 1915.
- RABI, Isidor** (physicist); Austria, July 29, 1898.
- RADFORD, Adm. Arthur W.** (Chmn., Joint Chiefs of Staff, U. S.); Chicago, Ill., Feb. 27, 1896.
- RAFT, George** (actor); New York City, Sept. 27, 1927.
- RAINS, Claude** (actor); London, Eng., Nov. 10, 1889.
- RANK, J. Arthur** (movie producer); Hull, Eng., Dec. 23, 1888.
- RANSOM, John Crowe** (poet); Pulaski, Tenn., Apr. 30, 1888.
- RATHBONE, Basil** (actor); Johannesburg, So. Af., June 13, 1892.
- RATOFF, Gregory** (movie director); St. Petersburg, Russ., Apr. 20, 1897.
- RATTIGAN, Terence** (dramatist); London, Eng., June 10, 1911.
- RATTNER, Abraham** (painter); Poughkeepsie, N. Y., July 8, 1895.
- RAY, Johnnie** (singer); Roseburg, Oreg., Jan. 10, 1927.
- RAYBURN, Sam** (Speaker of House, U. S.); Roane Co., Tenn., Jan. 6, 1882.
- RAYE, Martha** (Margie Yvonne Reed) (actress); Butte, Mont., Aug. 27, 1916.
- REAGAN, Ronald** (actor); Tampico, Ill.
- REDGRAVE, Michael** (actor); Bristol, Eng., Mar. 20, 1908.
- REED, Donna** (actress); Denison, Iowa.
- REED, Stanley F.** (U. S. jurist); Mason Co., Ky., Dec. 31, 1884.
- REESE, Pee Wee** (Harold) (baseball player); Ekron, Ky., July 23, 1919.
- REID, Helen Rogers** (publisher); Appleton, Wis., Nov. 23, 1882.
- REINER, Fritz** (orchestra conductor); Budapest, Hung., Dec. 19, 1888.
- REMARQUE, Erich Maria** (novelist); Osnabrück, Ger., June 22, 1898.
- RENNIE, Michael** (actor); Bradford, Yorks., Eng., Aug. 25, 1909.
- RESTON, James** (journalist); Clydebank, Scot., Nov. 3, 1909.
- REUTHER, Walter P.** (labor leader); Wheeling, W. Va., Sept. 1, 1907.
- REYNAUD, Paul** (French statesman); Barcelona, Fr., Oct. 15, 1878.
- REYNOLDS, Allie** (baseball player); Bethany, Okla., Feb. 10, 1919.
- REYNOLDS, Debbie** (Mary Reynolds) (actress); El Paso, Tex., Apr. 1, 1932.
- RHEE, Syngman** (President, South Korea); Seoul, Kor., Mar. 26, 1875.



- RICE, Elmer** (Elmer Reizenstein) (dramatist); New York City, Sept. 28, 1892.
- RICHARD, Maurice** (hockey player); Montreal, Que., Can., Aug. 4, 1921.
- RICHARDS, Paul** (baseball manager); Waxahachie, Tex., Nov. 21, 1908.
- RICHARDS, Vincent** (tennis player); New York City, Mar. 20, 1903.
- RICHARDSON, Sir Ralph** (actor); Cheltenham, Eng., Dec. 19, 1902.
- RICHTER, Conrad** (novelist); Pine Grove, Pa., Oct. 13, 1890.
- RICKENBACKER, Eddie** (Edward V.) (airline executive); Columbus, Ohio, Oct. 8, 1890.
- RICKEY, Branch** (baseball executive); Stockdale, Ohio, Dec. 20, 1881.
- RIDGWAY, Gen. Matthew B.** (Army officer, U. S.); Ft. Monroe, Va., Mar. 3, 1895.
- RINEHART, Mary Roberts** (novelist); Pittsburgh, Pa.
- RITTER, Thelma** (actress); Brooklyn, N. Y., 1905.
- RIVERA, Diego** (painter); Guanajuato, Mex., Dec. 8, 1886.
- RIZZUTO, Phil** (baseball player); New York City, Sept. 25, 1918.
- ROARK, Helen Willis Moody** (tennis player); Centerville, Calif., Oct. 6, 1905.
- ROBBINS, Jerome** (Jerome Rabinowitz) (choreographer); NYC, Oct. 11, 1918.
- ROBERTS, Kenneth** (novelist); Kennebunk, Maine, Dec. 8, 1885.
- ROBERTS, Robin** (baseball player); Springfield, Ill., Sept. 30, 1926.
- ROBESON, Paul** (baritone); Princeton, N. J., Apr. 9, 1898.
- ROBINSON, Edward G.** (Emmanuel Goldenberg) (actor); Bucharest, Rum., Dec. 12, 1893.
- ROBINSON, Frank** (baseball player); Beaumont, Tex., Aug. 31, 1935.
- ROBINSON, Henry Morton** (novelist); Boston, Mass., Sept. 7, 1898.
- ROBINSON, Jackie** (baseball player); Cairo, Ga., Jan. 31, 1919.
- ROBINSON, Ray** (boxer); Detroit, Mich., May 3, 1920.
- ROBSON, Flora** (actress); South Shields, Eng., Mar. 28, 1902.
- ROCHESTER** (Eddie Anderson) (comedian); Oakland, Calif., Sept. 18, 1905.
- ROCKEFELLER, David** (business executive); New York City, June 12, 1915.
- ROCKEFELLER, John D., Jr.** (industrialist); Cleveland, Ohio, Jan. 29, 1874.
- ROCKEFELLER, Laurance S.** (business executive); New York City, May 26, 1910.
- ROCKEFELLER, Nelson A.** (Administrative Assistant to President, U. S.); Bar Harbor, Maine, July 8, 1908.
- ROCKEFELLER, Winthrop** (business executive); New York City, May 1, 1912.
- ROCKWELL, Norman** (illustrator); New York City, Feb. 3, 1894.
- RODGERS, Richard** (song writer); New York City, June 28, 1902.
- RODZINSKI, Artur** (orchestra conductor); Spalato, Dalmatia, Jan. 2, 1892.
- ROGERS, Buddy** (Charles) (actor); Olathe, Kans., Aug. 13, 1904.
- ROGERS, Ginger** (Virginia McMath) (actress); Independence, Mo., July 16, 1911.
- ROGERS, Roy** (Leonard Slye) (actor); Cincinnati, Ohio, Nov. 5, 1912.
- ROGERS, Will, Jr.** (actor); New York City, Oct. 20, 1911.
- ROLAND, Gilbert** (Luis de Alonso) (actor); Juarez, Mex., Dec. 11, 1905.
- ROMAINS, Jules** (Louis Farigoule) (novelist); Saint-Jullen Chapeuil, Fr., Aug. 26, 1888.
- ROMAN, Ruth** (actress); Boston, Mass., Dec. 23, 1924.
- ROME, Harold** (song writer); Hartford, Conn., May 27, 1908.
- ROMERO, Cesar** (actor); New York City, Feb. 15, 1907.
- ROMULO, Carlos P.** (Philippine statesman); Manila, Phil., Jan. 14, 1899.
- ROONEY, Mickey** (Joe Yule, Jr.) (actor); Brooklyn, N. Y., Sept. 23, 1922.
- ROOSEVELT, Eleanor** (U. S. statesman); New York City, Oct. 11, 1884.
- ROSE, Billy** (Wm. S. Rosenberg) (stage producer); New York City, Sept. 6, 1899.
- ROSEN, Al** (Albert) (baseball player); Spangtanburg, S. C., Mar. 1, 1925.
- ROSS, Lanny** (singer); Seattle, Wash., Jan. 19, 1906.
- ROSSELLINI, Roberto** (movie director); Rome, It., May 8, 1906.
- ROUAULT, Georges** (painter); Paris, Fr., Mar. 27, 1871.
- RUBINSTEIN, Artur** (pianist); Warsaw, Poland, Jan. 28, 1889.
- RUGGLES, Charles** (actor); Los Angeles, Calif., Feb. 8, 1892.
- RUSSELL, Bertrand** (philosopher); Trellick, Eng., May 18, 1872.
- RUSSELL, Jane** (actress); Bemidji, Minn., June 21, 1921.
- RUSSELL, Rosalind** (actress); Waterbury, Conn., June 4, 1912.
- RYAN, Robert** (actor); Chicago, Ill., Nov. 1, 1913.
- SABLON, Jean** (singer); Paris, Fr., Mar. 2, 1912.
- SACKVILLE-WEST, Victoria** (poet & novelist); Sevenoaks, Eng., Mar. 9, 1892.
- SADDLER, Sandy** (Joe) (boxer); Boston, Mass., June 28, 1926.
- SAINT, Eva Marie** (actress); Newark, N. J., July 4, 1924.
- ST. DENIS, Ruth** (Ruth Denis) (dancer); Newark, N. J., Jan. 20, 1880.
- ST. LAURENT, Louis Stephen** (Prime Minister, Canada); Compton, Que., Can., Feb. 1, 1882.
- SALAZAR, António de Oliveira** (Premier, Portugal); Santa Comba, Port., 1889.
- SALINGER, J. D.** (novelist); New York City, Jan. 1, 1919.
- SALK, Jonas** (physician); New York City, Oct. 28, 1914.
- SANDBURG, Carl** (poet & biographer); Galena, Ill., Jan. 6, 1878.
- SANDE, Earl** (horse trainer); Groton, S. Dakota, Nov. 19, 1898.
- SANDERS, George** (actor); St. Petersburg, Rus., 1906.
- SARAZEN, Gene** (golfer); Harrison, N. J., Feb. 27, 1902.
- SARNOFF, David** (radio executive); Uzhitsk, Rus., Feb. 27, 1891.

- SAROYAN, William (story writer & dramatist); Fresno, Calif., Aug. 31, 1908.
- SARTRE, Jean-Paul (philosopher); Paris, Fr., June 21, 1905.
- SAVO, Jimmie (entertainer); New York City, 1895.
- SAYÃO, Bidú (soprano); Rio de Janeiro, Braz., May 11, 1906.
- SCELBA, Mario (Italian statesman); Sicily, Sept. 5, 1901.
- SCHAEFER, Jake (billiards player); Chicago, Ill., Oct. 18, 1894.
- SCHARY, Dore (movie producer); Newark, N. J., Aug. 31, 1905.
- SCHIAPARELLI, Elsa (fashion designer); Rome, It.
- SCHILDKRAUT, Joseph (actor); Vienna, Aus., Mar. 22, 1895.
- SCHIPA, Tito (tenor); Lecce, It., Jan. 2, 1890.
- SCHLESINGER, Arthur M., Jr. (historian); Columbus, Ohio, Oct. 15, 1917.
- SCHLESINGER, Arthur M., Sr. (historian); Xenia, Ohio, Feb. 27, 1888.
- SCHOENDIENST, Al (Albert) (baseball player); Germantown, Ill., Feb. 2, 1923.
- SCHULBERG, Budd (novelist); New York City, Mar. 27, 1914.
- SCHUMAN, Robert (French statesman); Luxembourg, Luxem., June 29, 1886.
- SCHUMAN, William (composer); New York City, Aug. 4, 1910.
- SCHWARTZ, Maurice (actor); Sedikow, Ukr., June 18, 1890.
- SCHWARZKOPF, Elisabeth (soprano); Jarotschin, Posen, Ger., Dec. 9, 1915.
- SCHWEITZER, Albert (organist, physician & philosopher); Kayserburg, Alsace, Jan. 14, 1875.
- SCORE, Herb (baseball player); Rosedale, N. Y., June 7, 1933.
- SCOTT, Barbara Ann (skater); Ottawa, Can., May 9, 1928.
- SCOTT, Hazel (pianist); Port of Spain, Trin., June 11, 1920.
- SCOTT, Martha (actress); Jamesport, Mo., Sept. 22, 1916.
- SCOTT, Randolph (actor); Orange Co., Va., Jan. 23, 1903.
- SCOTT, Raymond (band leader); Brooklyn, N. Y., Sept. 10, 1909.
- SCOTT, Zachary (actor); Austin, Tex., Feb. 24, 1914.
- SEABORG, Glenn T. (nuclear chemist); Ishpeming, Mich., Apr. 19, 1912.
- SEATON, Frederick A. (Secy. of Int., U. S.); Washington, D. C., Dec. 11, 1909.
- SEDMAN, Frank (tennis player); Mont Albert, Victoria, Austr., Oct. 29, 1927.
- SEGAL, Vivienne (singer); Philadelphia, Pa., 1897.
- SEGOVIA, Andrés (guitarist); Linares, Sp., Feb. 18, 1894.
- SEGURA, Francisco (tennis player); Guayaquil, Ec., June 20, 1921.
- SEIXAS, E. Victor, Jr. (tennis player); Philadelphia, Pa., Aug. 30, 1923.
- SELZNICK, David O. (movie producer); Pittsburgh, Pa., May 10, 1902.
- SERKIN, Rudolf (pianist); Eger, Boh., Mar. 28, 1903.
- SESSIONS, Roger (composer); Brooklyn, N. Y., Dec. 28, 1896.
- SCHANTZ, Bobby (baseball player); Pottstown, Pa., Sept. 26, 1925.
- SHAPLEY, Harlow (astronomer); Nashville, Mo., Nov. 2, 1885.
- SHARETT, Moshé (Moshé Shertok) (Israeli statesman); Kherson, Rus., Oct. 3, 1894.
- SHAUGHNESSY, Frank J. (baseball executive); Albion, Ill., Apr. 8, 1885.
- SHAW, Artie (clarinetist); New York City, May 23, 1910.
- SHAW, Irwin (dramatist & novelist); New York City, Feb. 27, 1913.
- SHAW, Robert (choral director); Red Bluff, Calif., Apr. 30, 1916.
- SHAWN, Ted (Edwin) (dancer); Kansas City, Mo., Oct. 21, 1891.
- SHEARER, Moira (Moira Shearer King) (ballerina); Dunfermline, Fifes, Scot., Jan. 17, 1926.
- SHEARER, Norma (actress); Montréal, Can., Aug. 10, 1902.
- SHEEAN, Vincent (novelist & essayist); Pana, Ill., Dec. 5, 1899.
- SHEEN, Fulton J. (clergyman & author); El Paso, Ill., May 8, 1895.
- SHERIDAN, Ann (actress); Denton, Tex., Feb. 21, 1915.
- SHERIFF, Robert (dramatist); Kingston-on-Thames, Eng., June 6, 1896.
- SHOEMAKER, Willie (jockey); Fabens, Tex., Aug. 19, 1931.
- SHOLOKHOV, Mikhail (novelist); Veshenskaya, Russ., 1905.
- SHORE, Dinah (singer); Winchester, Tenn., Mar. 1, 1917.
- SHOSTAKOVICH, Dmitri (composer); St. Petersburg, Rus., Sept. 26, 1906.
- SHRINER, Herb (comedian); Toledo, Ohio, May 29, 1918.
- SHULMAN, Max (humorist); St. Paul, Minn., Mar. 14, 1919.
- SHUMLIN, Herman (theatrical producer); Atwood, Colo., Dec. 6, 1898.
- SIBELIUS, Jean (composer); Tavastehus, Fin., Dec. 8, 1865.
- SIDNEY, Sylvia (Sophia Koskow) (actress); New York City, Aug. 8, 1910.
- SIKORSKY, Igor I. (aircraft designer); Kiev, Rus., May 25, 1889.
- SILONE, Ignazio (Secondo Tranquilli) (novelist); Pescina del Marsi, It., May 1, 1900.
- SILVERS, Phil (comedian); Brooklyn, N. Y., May 11, 1912.
- SIMENON, Georges (Georges Sim) (novelist); Liège, Belg., Feb. 13, 1903.
- SIMMONS, Curt (baseball player); Egypt, Pa., May 19, 1929.
- SIMMONS, Jean (actress); Crouch Hill, London, Eng., Jan. 31, 1929.
- SIMONSON, Lee (stage designer); New York City, June 26, 1888.
- SINATRA, Frank (singer & actor); Hoboken, N. J., Dec. 12, 1917.
- SINCLAIR, Upton (novelist); Baltimore, Md., Sept. 20, 1878.
- SINGER, Martial (baritone); Oloron-St.-Marie, Fr., Aug. 14, 1904.
- SIQUEIROS, David (painter); Mexico, 1894.
- SITWELL, Edith (poet); Scarborough, Eng., 1887.

- SITWELL, Sir Osbert (poet & satirist); London, Eng., Dec. 6, 1892.
- SKELTON, Red (Richard) (comedian); Vincennes, Ind., July 18, 1913.
- SKINNER, Cornelia Otis (actress); Chicago, Ill., May 30, 1901.
- SLAUGHTER, Enos (baseball player); Roxboro, N. C., Apr. 27, 1916.
- SLEZAK, Walter (actor); Vienna, Aus., May 3, 1902.
- SLOAN, Alfred P., Jr. (business executive); New Haven, Conn., May 23, 1875.
- SMITH, Betty (novelist); Brooklyn, N. Y., Dec. 15, 1904.
- SMITH, H. Allen (humorist); McLeansboro, Ill., Dec. 19, 1907.
- SMITH, Kate (Kathryn) (singer); Washington, D. C., 1910.
- SMITH, Kent (actor); Smithville, Maine, Mar. 19, 1907.
- SMITH, Lillian (novelist); Jasper, Fla., 1897.
- SMITH, Red (Walter) (sports writer); Green Bay, Wis., Sept. 25, 1905.
- SMYTHE, Conn (hockey executive); Toronto, Ont., Can., Feb. 1, 1895.
- SNEAD, Sam (golfer); Hot Springs, Va., May 27, 1912.
- SNIDER, Duke (Edwin) (baseball player); Los Angeles, Calif., Sept. 19, 1926.
- SOLOMON (Solomon Cutner) (pianist); London, Eng., 1902.
- SOTHERN, Ann (Harriette Lake) (actress); Valley City, N. Dak., Jan. 22, 1911.
- SPAACK, Paul Henri (Belgian statesman); Brussels, Belg., Jan. 25, 1899.
- SPAHN, Warren (baseball player); Buffalo, N. Y., Apr. 23, 1921.
- SPEAKER, Tris (baseball player); Hubbard, Tex., Apr. 4, 1888.
- SPENDER, Stephen (poet); nr. London, Eng., Feb. 28, 1909.
- SPEWACK, Bella (dramatist); Hungary, 1899.
- SPEWACK, Sam (dramatist); Russia, 1899.
- SPILLANE, Mickey (Frank Spillane) (novelist); Brooklyn, N. Y., Mar. 9, 1918.
- SPROUL, Robert G. (educator); San Francisco, Calif., May 22, 1891.
- STAGG, A. Alonzo (football coach); West Orange, N. J., Aug. 16, 1862.
- STANLEY, Kim (Patricia Reid) (actress); Tularosa, N. Mex., Feb. 11, 1925.
- STANWYCK, Barbara (Ruby Stevens) (actress); Brooklyn, N. Y., July 16, 1907.
- STASSEN, Harold E. (U. S. administrator); West St. Paul, Minn., Apr. 13, 1907.
- STEBER, Eleanor (soprano); Wheeling, W. Va., July 17, 1916.
- STEFANSSON, Vilhjalmur (explorer); Arnes, Can., Nov. 3, 1879.
- STEICHEN, Edward (photographer); Luxemburg, May 27, 1879.
- STEINBECK, John (novelist); Salinas, Calif., Feb. 27, 1902.
- STEINBERG, Saul (cartoonist); Ramnic-Sarat, Rum., June 15, 1914.
- STENGEL, Casey (Charles D.) (baseball manager); Kansas City, Mo., July 30, 1891.
- STERN, Isaac (violinist); Kremintecz, Rus., July 21, 1920.
- STEVENS, Mark (actor); Cleveland, Ohio, Dec. 13.
- STEVENS, Risé (mezzo-soprano); New York City, June 11, 1913.
- STEVENS, Robert T. (Former Secy. of Army U. S.); Fanwood, N. J., July 31, 1899.
- STEVENSON, Adlai E. (U. S. statesman); Los Angeles, Calif., Feb. 5, 1900.
- STEWART, James (actor); Indiana, Pa., May 20, 1908.
- STICKNEY, Dorothy (actress); Dickinson, N. Dak., June 21, 1900.
- STOKES, Thomas L. (journalist); Atlanta, Ga., Nov. 1, 1898.
- STOKOWSKI, Leopold (orchestra conductor); London, Eng., Apr. 18, 1882.
- STONE, Fred A. (actor); Valmont, Colo., Aug. 19, 1873.
- STONE, Irving (biographer), San Francisco, Calif., July 14, 1903.
- STONG, Philip (novelist); Keosauqua, Iowa, Jan. 27, 1899.
- STRANAHAN, Frank R. (golfer); Toledo, Ohio, Aug. 5, 1922.
- STRAUSS, Lewis L. (AEC Chmn., U. S.); Charleston, W. Va., Jan. 31, 1896.
- STRAVINSKY, Igor (composer); Oranienbaum, Rus., June 17, 1882.
- STREETER, Edward (novelist); New York City, Aug. 1, 1891.
- STRIBLING, Thomas S. (banker & novelist); Clifton, Tenn., Mar. 4, 1881.
- STRIJDOM, Johannes Gerhardus (South African statesman); Willowmore, Cape Colony, July 14, 1893.
- STRONG, Ken (football player); West Haven, Conn., Apr. 21, 1906.
- STURDIVANT, Tom (baseball player); Gordon, Kans., Apr. 28, 1930.
- STURGES, Preston (dramatist & director); Chicago, Ill., Aug. 29, 1898.
- SUCKOW, Ruth (novelist); Hawarden, Iowa, Aug. 6, 1892.
- SULLAVAN, Margaret (actress); Norfolk, Va., May 16, 1911.
- SULLIVAN, Barry (Patrick Barry) (actor); New York City, Aug. 29, 1912.
- SULLIVAN, Ed (columnist); New York City, Sept. 28, 1902.
- SULLIVAN, Francis L. (actor); London, Eng., Jan. 6, 1903.
- SULLIVAN, Frank (baseball player); Buena Park, Calif., Jan. 23, 1930.
- SULLIVAN, Frank (humorist); Saratoga Springs, N. Y., Sept. 22, 1892.
- SULZBERGER, Arthur H. (publisher); New York City, Sept. 12, 1891.
- SUMMERFIELD, Arthur E. (Postmaster General of U. S.); Pinconning, Mich., Mar. 1, 1899.
- SVANHOLM, Set (tenor); Vasteras, Sweden, Sept. 2, 1904.
- SWANSON, Gloria (Josephine Swenson) (actress); Chicago, Ill., Mar. 27, 1898.
- SWARTHOUT, Gladys (mezzo-soprano); Deerwater, Mo., Dec. 25, 1904.
- SWOPE, Herbert Bayard (journalist); St. Louis, Mo.
- SZELL, George (orchestra conductor); Budapest, Hung., June 7, 1897.
- SZIGETI, Joseph (violinist); Budapest, Hungary, Sept. 5, 1892.
- TAGLIAVINI, Ferruccio (tenor); Reggio Emilia, It., Aug. 14, 1913.



- TALBERT, Billy (tennis player); Cincinnati, Ohio, Sept. 4, 1918.
- TALBURY, Harold M. (cartoonist); Toledo, Ohio, Feb. 19, 1895.
- TALLCHIEF, Maria (ballerina); Fairfax, Okla., Jan. 24, 1925.
- TANDY, Jessica (actress); London, Eng., June 7, 1909.
- TATE, Allen (poet); Winchester, Ky., Nov. 19, 1899.
- TAYLOR, Deems (composer); New York City, Dec. 22, 1885.
- TAYLOR, Elizabeth (actress); London, Eng., Feb. 27, 1932.
- TAYLOR, Gen. Maxwell D. (military officer, U. S.); Keytesville, Mo., Aug. 26, 1901.
- TAYLOR, Robert (S. Arlington Brugh) (actor); Filley, Nebr., Aug. 5, 1911.
- TCHELITCHCHEV, Pavel (painter); nr. Moscow, Rus., Sept. 21, 1898.
- TEBALDI, Renata (soprano); Pesaro, It., Jan. 2, 1922.
- TEBBETTS, Birdie (George R.) (baseball manager); Nashua, N. H., Nov. 10, 1914.
- TELLER, Edward (physicist); Budapest, Hung., Jan. 15, 1908.
- TEMPLE, John (baseball player); Lexington, N. C., Aug. 8, 1929.
- TEMPLE, Shirley (actress); Santa Monica, Calif., Apr. 23, 1928.
- TEMPLETON, Alec (pianist); Cardiff, Wales, July 4, 1910.
- TEYTE, Maggie (soprano); Wolverhampton, Eng., Apr. 17, 1891.
- THEBOM, Blanche (mezzo-soprano); Moneesen, Pa., Sept. 19, 1919.
- THOMAS, Danny (comedian); Deerfield, Mich., Jan. 6, 1914.
- THOMAS, Frank (baseball player); Pittsburgh, Pa., June 11, 1921.
- THOMAS, John Charles (baritone); Meyersdale, Pa., Sept. 6, 1891.
- THOMAS, Lowell (lecturer & author); Woodington, Ohio, Apr. 6, 1892.
- THOMAS, Norman (Socialist leader); Marion, Ohio, Nov. 20, 1884.
- THOMPSON, Randall (composer); New York City, Apr. 21, 1899.
- THOMSON, Virgil (composer); Kansas City, Mo., Nov. 25, 1896.
- THORBERG, Kerstin (contralto); Venjan, Swed., May 19, 1906.
- THOREZ, Maurice (French Communist leader); Noyelles-Gaudault, Pas-de-Calais, Fr., Apr. 28, 1900.
- THORNDIKE, Dame Sybil (actress); Gainsborough, Lincs., Eng., Oct. 24, 1882.
- THURBER, James (humorist); Columbus, Ohio, Dec. 8, 1894.
- TIBBETT, Lawrence (baritone); Bakersfield, Calif., Nov. 16, 1896.
- TIERNEY, Gene (actress); Brooklyn, N. Y., Nov. 20, 1920.
- TITO (Josip Brozovich or Broz) (President, Yugoslavia); Croatia, May 25, 1892.
- TODD, Ann (actress); Hartford, Ches., Eng., Jan. 24, 1910.
- TODD, Richard (actor); Dublin, Ire., 1920.
- TOGLIATTI, Palmiro (Italian Communist leader); Rome, Italy, 1901.
- STONE, Franchot (actor); Niagara Falls, N. Y., Feb. 27, 1905.
- TOSCANINI, Arturo (orchestra conductor); Parma, It., Mar. 25, 1867.
- TOUREL, Jennie (mezzo-soprano); Montreal, Can., June 22, 1910.
- TOYNBEE, Arnold J. (historian); London, Eng., Apr. 14, 1889.
- TRABERT, Tony (tennis player); Cincinnati, Ohio, Aug. 16, 1930.
- TRACY, Lee (actor); Atlanta, Ga., Apr. 14, 1898.
- TRACY, Spencer (actor); Milwaukee, Wis., Apr. 5, 1900.
- TRAUBEL, Helen (soprano); St. Louis, Mo., June 16, 1903.
- TRAUTMAN, George M. (baseball executive); Bucyrus, Ohio, Jan. 11, 1890.
- TREVOR, Claire (actress); New York City, Mar. 8, 1909.
- TRUCKS, Virgil (baseball player); Birmingham, Ala., Apr. 26, 1919.
- TRUEX, Ernest (actor); Kansas City, Mo., Sept. 19, 1890.
- TRUJILLO Y MOLINA, Rafael (Dominican Republic statesman); San Cristóbal, Oct. 24, 1891.
- TRUMAN, Harry S. (U. S. statesman); Lamar, Mo., May 8, 1884.
- TRUMAN, Margaret (soprano); Independence, Mo., Feb. 17, 1924.
- TUCKER, Richard (tenor); New York City, Aug. 28, 1914.
- TUCKER, Sophie (Sophie Abuza) (entertainer); Russia, 1884.
- TUDOR, Anthony (choreographer); London, Eng., Apr. 4, 1909.
- TUNNEY, Gene (James J.) (boxer); New York City, May 25, 1898.
- TURNER, Lana (Julia Jean Turner) (actress); Wallace, Idaho, Feb. 8, 1920.
- TURNESA, Willie (golfer); Elmsford, N. Y., Jan. 29, 1914.
- TWINING, Gen. Nathan F. (Air Force officer, U. S.); Monroe, Wis., Oct. 11, 1897.
- UNTERMEYER, Louis (poet & anthologist); New York City, Oct. 1, 1885.
- UREY, Harold C. (chemist); Walkerton, Ind., Apr. 29, 1893.
- USTINOV, Peter (dramatist & actor); London, Eng., 1921.
- VALLEE, Rudy (Hubert) (actor & band leader); Island Pond, Vermont, July 28, 1901.
- VANDERBILT, Alfred G. (horse racing executive); London, Eng., Sept. 22, 1912.
- VAN DOREN, Mark (poet & critic); Hope, Ill., June 13, 1894.
- VAN DRUTEN, John (dramatist); London, Eng., June 1, 1901.
- VAUGHN-WILLIAMS, Ralph (composer); Down Ampney, Eng., Oct. 12, 1872.
- VERA-ELLEN (Vera-Ellen Rohe) (actress); Cincinnati, Ohio, Feb. 16.
- VIDOR, King (movie director & producer); Galveston, Tex., Feb. 8, 1895.
- VILLA-LOBOS, Heitor (composer); Rio de Janeiro, Braz., Mar. 5, 1884.
- VIRDON, Bill (baseball player); Hazel Park, Mich., 1901.

- VLAMINCK, Maurice de (painter); Paris, Fr., Apr. 4, 1876.
- VON STROHEIM, Erich (movie director & actor); Vienna, Aus., Sept. 22, 1885.
- WAGNER, Robert (actor); Detroit, Mich., Feb. 10, 1930.
- WAGNER, Robert F. (Mayor, NYC); New York City, Apr. 20, 1910.
- WALCOTT, Jersey Joe (Arnold Cream) (boxer); Merchantville, N. J., Jan. 31, 1914.
- WALKER, Mickey (boxer); Elizabeth, N. J., July 13, 1901.
- WALKER, Nancy (Ann Myrtle Swoyer) (actress); Philadelphia, Pa.
- WALLACE, DeWitt (publisher); St. Paul, Minn., Nov. 12, 1889.
- WALLACE, Henry A. (U. S. statesman); Adair Co., Iowa, Oct. 7, 1888.
- WALTARI, Mika (novelist); Helsinki, Fin., Sept. 19, 1908.
- WALTER, Bruno (Bruno Walter Schlesinger) (orchestra conductor); Berlin, Ger., Sept. 17, 1876.
- WARING, Fred (band leader); Tyrone, Pa., June 9, 1900.
- WARNER, Sylvia Townsend (novelist & poet); Harrow-on-the-Hill, Eng., 1893.
- WARREN, Earl (U. S. jurist); Los Angeles, Calif., Mar. 19, 1891.
- WARREN, Leonard (baritone); New York City, Apr. 21, 1911.
- WARREN, Robert Penn (novelist); Guthrie, Ky., Apr. 24, 1905.
- WATERS, Ethel (actress & singer); Chester, Pa., Oct. 31, 1900.
- WAUGH, Evelyn (novelist); London, 1903.
- WAYNE, David (actor); Traverse City, Mich., Jan. 30, 1914.
- WAYNE, John (Marion Michael Morrison) (actor); Winterset, Iowa, May 26, 1907.
- WEBB, Clifton (actor); Indiana, 1891.
- WEBB, Jack (actor); Santa Monica, Calif., Apr. 2, 1920.
- WEBSTER, Margaret (actress & director); New York City, Mar. 15, 1905.
- WEEKS, Sinclair (Secy. of Commerce, U. S.); West Newton, Mass., June 15, 1893.
- WEIR, Ernest T. (industrialist); Pittsburgh, Pa., Aug. 1, 1875.
- WEISSMULLER, Johnny (swimmer & actor); Chicago, Ill.
- WELLES, Orson (actor & director); Kenosha, Wis., May 6, 1915.
- WELTY, Eudora (novelist); Jackson, Miss., Apr. 13, 1909.
- WESCOTT, Glenway (novelist); Kewas-kum, Wis., Apr. 11, 1901.
- WEST, Mae (actress); Brooklyn, N. Y., Aug. 17, 1892.
- WEST, Rebecca (Cicely Fairfield) (novelist); Edinburgh, Scot., Dec. 25, 1892.
- WHITEMAN, Paul (band leader); Denver, Colo., 1891.
- WHITNEY, C. V. (horse racing executive); New York City, Feb. 20, 1899.
- WHORF, Richard (actor); Winthrop, Mass.
- WIDENER, George D. (horse racing executive); Philadelphia, Pa., Mar. 11, 1889.
- WIDMARK, Richard (actor); Sunrise, Minn., Dec. 26, 1914.
- WILDE, Cornel (actor); New York City, Oct. 13, 1915.
- WILDER, Billy (movie director); Vienna, Aus., June 22, 1906.
- WILDER, Thornton (novelist); Madison, Wis., Apr. 17, 1897.
- WILDING, Michael (actor); Westcliff, Essex, Eng., July 23, 1912.
- WILLARD, Jess (boxer); Pottawatomie Co., Kans., Dec. 29, 1883.
- WILLIAMS, Emlyn (dramatist); Mostyn, Wales, Nov. 26, 1905.
- WILLIAMS, Esther (swimmer & actress); Inglewood, Calif., Aug. 8, 1923.
- WILLIAMS, Gluyas (cartoonist); San Francisco, Calif., July 23, 1888.
- WILLIAMS, Ted (baseball player); San Diego, Calif., Oct. 30, 1918.
- WILLIAMS, Tennessee (Thomas L. Williams) (dramatist); Columbus, Miss., Mar. 26, 1912.
- WILLIAMS, William Carlos (poet); Rutheford, N. J., Sept. 17, 1883.
- WILSON, Charles Edward (industrialist); New York City, Nov. 18, 1886.
- WILSON, Charles Erwin (Secy. of Defense, U. S.); Minerva, Ohio, July 18, 1890.
- WILSON, Edmund (literary critic); Red Bank, N. J., May 8, 1895.
- WILSON, Marie (actress); Anaheim, Calif., Aug. 19, 1916.
- WINCHELL, Paul (ventriloquist); New York City, Dec. 21, 1923.
- WINCHELL, Walter (columnist); New York City, Apr. 7, 1897.
- WINDSOR, Duchess of (Bessie Wallis Warfield); Blue Ridge Summit, Pa., June 1, 1896.
- WINDSOR, Duke of (formerly King Edward VIII, Gr. Brit.); Richmond Park, Eng., June 23, 1894.
- WINNINGER, Charles (actor); Athens, Wis., May 26, 1884.
- WINTERS, Shelley (Shirley Schrieff) (actress); St. Louis, Ill., Aug. 18, 1922.
- WOOD, Peggy (actress); Brooklyn, N. Y., Feb. 9, 1892.
- WOOLLEY, Monte (Edgar) (actor); New York City, Aug. 17, 1888.
- WORTMAN, Denys (cartoonist); Saugerties, N. Y., May 1, 1887.
- WOUK, Herman (novelist); New York City, May 27, 1915.
- WRIGHT, Frank Lloyd (architect); Richland Center, Wis., June 8, 1869.
- WRIGHT, Richard (novelist); nr. Natchez, Miss., Sept. 4, 1908.
- WRIGHT, Teresa (actress); New York City, Oct. 27, 1918.
- WYATT, Jane (actress); Campgaw, N. J., Aug. 12, 1912.
- WYETH, Andrew (painter); Chadds Ford, Pa., July 12, 1917.
- WYLER, William (movie director); Mulhouse, Fr., July 1, 1902.
- WYLIE, Philip (novelist); Beverly, Mass., May 12, 1902.
- WYMAN, Jane (Sarah Fulks) (actress); St. Joseph, Mo., Jan. 4, 1914.
- WYNN, Ed (Edwin Leopold) (comedian); Philadelphia, Pa., Nov. 9, 1886.
- WYNN, Keenan (actor); New York City, July 27, 1916.
- YERBY, Frank (novelist); Augusta, Ga., Sept. 5, 1916.

**YOSHIDA, Shigeru** (Japanese statesman); Tokyo, Jap., Sept. 22, 1878.  
**YOUNG, Alan** (Angus Young) (actor); No. Shields, Northum., Eng., Nov. 19, 1919.  
**YOUNG, Loretta** (Gretchen) (actress); Salt Lake City, Utah, Jan. 6, 1913.  
**YOUNG, Robert** (actor); Chicago, Ill., Feb. 22, 1907.  
**YOUNG, Robert R.** (railroad executive); Canadian, Tex., Feb. 14, 1897.  
**YURKA, Blanche** (actress); St. Paul, Minn., June 19, 1893.

**ZAHEDI, Fazollah** (Iranian statesman); Iran, 1897.  
**ZANUCK, Darryl F.** (movie director); Wahoo, Neb., Sept. 5, 1902.  
**ZIMBALIST, Efrem** (violinist); Rostov-on-Don, Rus., Apr. 9, 1889.  
**ZORACH, William** (sculptor); Eurburg, Lith., Feb. 28, 1887.  
**ZUKOR, Adolph** (movie producer); Ricse, Hung., Jan. 7, 1873.  
**ZWEIG, Arnold** (novelist); Grosz-Glogau, Silesia, Nov. 10, 1887.

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Edna Ferber  
Dorothy Canfield  
Fisher  
Waldo Frank  
Robert Frost  
Paul Eliot Green  
Ferris Greenslet  
Francis Hackett  
Hermann Hagedorn  
Edith Hamilton  
Oscar Hammerstein II  
Lillian Hellman  
John Hersey  
Robert Silliman Hill-  
yer  
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ing  
Paul Horgan  
M. A. De Wolfe Howe  
Rolfe Humphries

Christopher Isher-  
wood  
Robinson Jeffers  
Matthew Josephson  
George S. Kaufman  
Helen Keller  
Alfred Kreyenborg  
Louis Kronenberger  
Joseph Wood Krutch  
Walter Lippmann  
Robert Lowell  
Archibald MacLeish  
John Phillips Mar-  
quand  
Carson McCullers  
William McFee  
Phyllis McGinley  
Margaret Mead  
Marianne Craig  
Moore  
Christopher Morley  
Lewis Mumford  
Ogden Nash  
Robert Nathan  
John G. Neihardt  
Allan Nevins  
Reinhold Niebuhr  
Donald Culross Peat-  
tie  
Ralph Barton Perry  
Arthur Stanwood Pier  
Katherine Anne Por-  
ter  
Ezra Pound  
Elmer Rice  
Kenneth L. Roberts  
Theodore Roethke  
Carl Sandburg  
William Saroyan  
Henry Dwight Sedg-  
wick  
Vincent Sheean  
Upton Sinclair  
John E. Steinbeck  
Burton E. Stevenson  
Allen Tate  
Dorothy Thompson  
Chauncey Brewster  
Tinker  
Lionel Trilling  
Louis Untermeyer  
Mark Van Doren  
John Van Druten  
Robert Penn Warren  
Eudora Welty  
Glenway Wescott  
John Hall Wheelock  
Thornton Wilder  
Tennessee Williams  
William Carlos Wil-  
liams  
Yvor Winters  
Stark Young

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Stuart Davis  
José de Creeft  
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ano  
Donald De Lue  
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Sidney E. Dickinson  
Guy Pène duBois  
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Daniel Garber  
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Walker Hancock  
Herbert Haseltine  
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Donal Hord  
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Karl Knaths  
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Lee Lawrie  
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Lockman  
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Oronzio Maldarelli  
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Bruce Moore  
Thomas W. Nason  
Hobart Nichols  
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Aaron Copland  
Henry Cowell  
Percy Grainger  
Louis Gruenberg  
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Edward Burlingame  
Hill  
Paul Hindemith  
Philip James  
Otto Luening  
Bohuslav Martinu  
Douglas Moore  
Arne Oldberg  
Walter Piston  
Quincy Porter  
John Powell  
Wallingford Riegg  
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Bernard Rogers  
Carl Ruggles  
William Schuman  
Roger Sessions  
Arthur Shepherd  
Leo Sowerby  
Igor Stravinsky  
Deems Taylor  
Randall Thompson  
Virgil Thomson  
Edgard Varèse

# ★ WHO WAS WHO ★

*Prepared by*

## A. N. MARQUIS CO., Publishers of WHO'S WHO IN AMERICA

For the Presidents of the United States, consult the entry Presidents in the index. For the Rulers of England, France, Germany and Russia, consult the entry Rulers. In many instances below, the original name or form of the name of the individual is shown in parentheses.

- ABELARD**, Peter (Pierre Abélard) (philosopher); b. near Nantes, Fr. (1079-1142).  
**ADAMS**, Charles Francis (diplomat); b. Boston, Mass. (1807-1886).  
**ADAMS**, Henry Brooks (historian); b. Boston, Mass. (1838-1918).  
**ADAMS**, James Truslow (historian); b. Brooklyn, N. Y. (1878-1949).  
**ADAMS**, Maude (Maude Kiskadden) (actress); b. Salt Lake City, Utah (1872-1953).  
**ADAMS**, Samuel (American Revolutionary patriot); b. Boston, Mass. (1722-1803).  
**ADDAMS**, Jane (social worker); b. Cedarville, Ill. (1860-1935).  
**ADE**, George (humorist); b. Kentland, Ind. (1866-1944).  
**ADLER**, Alfred (psychoanalyst); b. Vienna, Aus. (1870-1937).  
**AESCHYLUS** (dramatist); b. Eleusis, Attica (525-456 B.C.).  
**AESOP** (fabulist); birthplace unknown (lived c. 600 B.C.).  
**ALCOTT**, Louisa May (novelist); b. Germantown, Pa. (1832-1888).  
**ALDEN**, John (American Pilgrim); b. England (1599?-1687).  
**ALEXANDER** the Great (monarch & conqueror); b. Pella, Macedonia (356-323 B.C.).  
**ALGER**, Horatio (author); b. Revere, Mass. (1834-1899).  
**ALLEN**, Ethan (American Revolutionary soldier); b. Litchfield, Conn. (1739-1789).  
**ALLEN**, Fred (John Florence Sullivan) (comedian); b. Cambridge, Mass. (1894-1956).  
**ANDERSEN**, Hans Christian (fairytale writer); b. Odense, Den. (1805-1875).  
**ANTHONY**, Mark (Marcus Antonius) (statesman); b. Rome (83?-30 B.C.).  
**ANTHONY**, Susan Brownell (woman suffragist); b. Adams, Mass. (1820-1906).  
**AQUINAS**, St. Thomas (philosopher); b. near Aquino, It. (1225?-1274).  
**ARCHIMEDES** (physicist & mathematician); b. Syracuse, Sicily (287?-212 B.C.).  
**ARISTOPHANES** (dramatist); b. Athens (448?-380 B.C.).  
**ARISTOTLE** (philosopher); b. Stagira (384-322 B.C.).  
**ARNOLD**, Benedict (American traitor); b. Norwich, Conn. (1741-1801).  
**ARNOLD**, Matthew (poet & critic); b. Laleham, Mid., Eng. (1822-1888).  
**ASTOR**, John Jacob (financier); b. Waldorf, Ger. (1763-1848).  
**ATTILA** (King of Huns, called "Scourge of God") (406?-453).  
**AUDUBON**, John James (naturalist & artist); b. Haiti (1785-1851).  
**AUER**, Leopold (violinist & teacher); b. Veszprim, Hung. (1845-1930).  
**AUGUSTINE**, Saint (Aurelius Augustinus) (philosopher); b. Numidia (354-430).  
**AUGUSTUS** (Gaius Octavius) (Roman emperor); b. Rome (63 B.C.-A.D. 14).  
**AUSTEN**, Jane (novelist); b. Steventon, Hamps., Eng. (1775-1817).  
**BACH**, Johann Sebastian (composer); b. Eisenach, Ger. (1685-1750).  
**BACON**, Francis (philosopher & essayist); b. London, England (1561-1626).  
**BACON**, Roger (philosopher & scientist); b. Ilchester, Som., Eng. (1214?-1294).  
**BAEDEKER**, Karl (travel-guidebook publisher); b. Essen, Ger. (1801-1859).  
**BALBOA**, Vasco Núñez de (explorer); b. Jerez de los Caballeros, Sp. (1475-1517).  
**BALZAC**, Honoré de (novelist); b. Tours, Fr. (1799-1850).  
**BANTING**, Sir Frederick Grant (research physician); b. Canada (1891-1941).  
**BARA**, Theda (Theodosia Goodman) (actress); b. Cincinnati, Ohio (1890-1955).  
**BARKLEY**, Alben William (U. S. statesman); b. Graves Co., Ky. (1877-1956).  
**BARNUM**, Phineas Taylor (showman); b. Bethel, Conn. (1810-1891).  
**BARRIE**, Sir James Matthew (novelist & dramatist); b. Kirriemuir, Forfarshire, Scot. (1860-1937).  
**BARRY**, Philip (dramatist); b. Rochester, N. Y. (1896-1949).  
**BARRYMORE**, John (actor); b. Philadelphia, Pa. (1882-1942).  
**BARRYMORE**, Lionel (actor); b. Philadelphia, Pa. (1878-1954).  
**BARTÓK**, Béla (composer); b. Nagyszentmiklos, Transylvania, Hung. (1881-1945).  
**BARTON**, Clara (Clarissa Harlowe Barton) (social worker); b. Oxford, Mass. (1821-1912).  
**BAUDELAIRE**, Charles Pierre (poet); b. Paris, Fr. (1821-1867).  
**BECKET**, Thomas à (Archbishop of Canterbury); b. London, Eng. (1118?-1170).  
**BEDE**, Saint (called "The Venerable Bede") (scholar); b. Monkwearmouth, Eng. (673-735).  
**BEECHER**, Henry Ward (clergyman); b. Litchfield, Conn. (1813-1887).  
**BEERBOHM**, Sir Max (author); b. London, Eng. (1872-1956).

- BEETHOVEN**, Ludwig van (composer); b. Bonn, Ger. (1770-1827).
- BELASCO**, David (dramatist & producer); b. San Francisco, Calif. (1854-1931).
- BELL**, Alexander Graham (inventor); b. Edinburgh, Scot. (1847-1922).
- BELLAMY**, Edward (author); b. Chicopee Falls, Mass. (1850-1898).
- BELLOWS**, George Wesley (painter & lithographer); b. Columbus, Ohio (1882-1925).
- BENCHLEY**, Robert Charles (humorist); b. Worcester, Mass. (1839-1945).
- BENEŠ**, Eduard (Czech statesman); b. Kožlany, Bohemia (1884-1948).
- BENÉT**, Stephen Vincent (poet & story writer); b. Bethlehem, Pa. (1898-1943).
- BENÉT**, William Rose (poet & novelist); b. Ft. Hamilton, N. Y. (1886-1950).
- BENJAMIN**, Judah Philip (Confederate statesman); b. St. Thomas, BWI (1811-1884).
- BENNETT**, Enoch Arnold (novelist & dramatist); b. Hanley, Staffs., Eng. (1867-1931).
- BENNETT**, James Gordon (editor); b. Keith, Banffshire, Scot. (1795-1872).
- BERLIOZ**, Louis Hector (composer); b. La Côte-St.-André, Fr. (1803-1869).
- BERNHARDT**, Sarah (Rosine Bernard) (actress); b. Paris, Fr. (1844-1923).
- BEVIN**, Ernest (British statesman); b. Somersetshire, Eng. (1884-1951).
- BIERGE**, Ambrose Gwinnett (journalist); b. Meigs Co., Ohio (1842-1914).
- BISMARCK-SCHÖNHAUSEN**, Prince Otto Eduard Leopold von (German statesman); b. Schönhausen, Prus. (1815-1898).
- BIZET**, Georges (Alexandre César Léopold Bizet) (composer); b. Paris, Fr. (1838-1875).
- BLACKSTONE**, Sir William (jurist); b. London, Eng. (1723-1780).
- BLAKE**, William (poet & artist); b. London, Eng. (1757-1827).
- BLUM**, Léon (French statesman); b. Paris, Fr. (1872-1950).
- BOCCACCIO**, Giovanni (author); b. Paris, Fr. (1313-1375).
- BOLÍVAR**, Simón (South American liberator); b. Caracas, Venez. (1783-1830).
- BOND**, Carrie (nee Jacobs) (composer of songs); b. Janesville, Wis. (1862-1946).
- BOONE**, Daniel (frontiersman); b. near Reading, Pa. (1734-1820).
- BOOTH**, Edwin Thomas (actor); b. Bel Air, Md. (1833-1893).
- BOOTH**, Evangeline Cory (religious leader); b. London, Eng. (1865-1950).
- BOOTH**, John Wilkes (actor; assassin of Lincoln); b. Hartford County, Md. (1838-1865).
- BOOTH**, William (called General Booth) (religious leader); b. Nottingham, Eng. (1829-1912).
- BORGIA**, Cesare (nobleman & soldier); b. Rome (1475?-1507).
- BORGIA**, Lucrezia (Duchess of Ferrara); b. Rome (1480-1519).
- BOSWELL**, James (diarist & biographer); b. Edinburgh, Scot. (1740-1795).
- BOTTICELLI**, Sandro (Alessandro di Mariano del Filipepi) (painter); b. Florence (1444?-1510).
- BOWIE**, James (soldier); b. Burke Co., C. (1799-1836).
- BRAHMS**, Johannes (composer); b. Hamburg, Ger. (1833-1897).
- BRAILLE**, Louis (teacher of blind); b. Couvray, Fr. (1809-1852).
- BRANDEIS**, Louis Dembitz (jurist); b. Louisville, Ky. (1856-1941).
- BRICE**, Fanny (Fannie Borach) (comedienne); b. New York City (1892-1951).
- BRISBANE**, Arthur (journalist); b. Buffalo, N. Y. (1864-1936).
- BROMFIELD**, Louis (novelist); b. Mansfield, Ohio (1896-1956).
- BRONTË**, Charlotte (novelist); b. Thornton, Yorks., Eng. (1816-1855).
- BRONTË**, Emily Jane (novelist); b. Thornton, Yorks., Eng. (1818-1848).
- BROOKE**, Rupert (poet); b. Rugby, Warwicks., Eng. (1887-1915).
- BROWN**, Matthew Heywood Campbell (journalist); b. Brooklyn, N. Y. (1888-1939).
- BROWN**, John (abolitionist); b. Torrington, Conn. (1800-1859).
- BROWNING**, Elizabeth Barrett (poet); b. Coxhoe Hall, Durham, England (1806-1861).
- BROWNING**, Robert (poet); b. London, Eng. (1812-1889).
- BRUEGHEL**, Pieter (painter); b. near Brecht, Flanders (1520-1569).
- BRUTUS**, Marcus Junius (Roman politician); (85?-42 B.C.).
- BRYAN**, William Jennings (orator & politician); b. Salem, Ill. (1860-1925).
- BRYANT**, William Cullen (poet & editor); b. Cummington, Mass. (1794-1878).
- BUDDHA**. See Gautama Buddha.
- BUFFALO BILL** (William Frederick Cody) (scout); b. Scott Co., Iowa (1846-1917).
- BUNYAN**, John (preacher & author); b. Elstow, Eng. (1628-1688).
- BURBANK**, Luther (horticulturist); b. Lancaster, Mass. (1849-1926).
- BURKE**, Edmund (statesman); b. Dublin, Ire. (1729-1797).
- BURNS**, Robert (poet); b. Alloway, Scot. (1759-1796).
- BURR**, Aaron (U. S. political leader); b. Newark, N. J. (1756-1836).
- BUTLER**, Nicholas Murray (educator); b. Elizabeth, N. J. (1862-1947).
- BUTLER**, Samuel (author); b. Langar, Nottingham, Eng. (1835-1902).
- BYRON**, George Gordon (6th Baron Byron) (poet); b. London, Eng. (1788-1824).
- CABOT**, John (Giovanni Caboto) (navigator); b. Genoa (1450-1498).
- CABOT**, Sebastian (navigator); b. Venetia (1476?-1557).
- CAESAR**, Gaius Julius (Roman statesman); b. Rome (100?-44 B.C.).
- CÄLHERN**, Louis (Carl Henry Vogt) (actor); b. New York City (1895-1956).
- CALHOUN**, John Caldwell (statesman); b. near Calhoun Mills, S. C. (1782-1850).
- CALVIN**, John (Jean Chauvin) (religious reformer); b. Noyon, Picardy (1509-1564).
- CARDOZO**, Benjamin Nathan (jurist); b. New York City (1870-1938).



- CARLYLE**, Thomas (essayist & historian); b. Ecclefechan, Dumfriesshire, Scot. (1795-1881).
- CARNEGIE**, Andrew (industrialist); b. Dunfermline, Scot. (1835-1919).
- CARROLL**, Lewis (Charles Lutwidge Dodgson) (author & mathematician); b. Daresbury, Ches., Eng. (1832-1898).
- CARSON**, Kit (Christopher) (scout); b. Madison Co., Ky. (1809-1868).
- CARUSO**, Enrico (Errico) (tenor); b. Naples, It. (1873-1921).
- CARVER**, George Washington (botanist); b. Missouri (1864-1943).
- CASANOVA DE SEINGALT**, Giovanni Jacopo (adventurer); b. Venice (1725-1798).
- CATHER**, Willa Sibert (novelist); b. Winchester, Va. (1876-1947).
- CATO**, Marcus Porcius (called Cato the Elder) (statesman); b. Tusculum (234-149 B.C.).
- CATT**, Carrie Chapman (nee Lane) (woman suffragist); b. Ripon, Wis. (1859-1947).
- CELLINI**, Benvenuto (goldsmith & sculptor); b. Florence (1500-1571).
- CERVANTES SAAVEDRA**, Miguel de (novelist); b. Alcalá de Henares, Sp. (1547-1616).
- CÉZANNE**, Paul (painter); b. Aix-en-Provence, Fr. (1839-1906).
- CHALIAPIN**, Feodor Ivanovich (basso); b. Kazan, Rus. (1873-1938).
- CHAMPLAIN**, Samuel de (explorer); b. nr. Rochefort, Fr. (1567?-1635).
- CHANEY**, Lon (actor); b. Colorado Springs, Colo. (1883-1930).
- CHARLEMAGNE** (Holy Roman Emperor); birthplace unknown (742-814).
- CHATTERTON**, Thomas (poet); b. Bristol, Eng. (1752-1770).
- CHAUCER**, Geoffrey (poet); b. London, Eng. (1340?-1400).
- CHEKHOV**, Anton Pavlovich (dramatist & story writer); b. Taganrog, Rus. (1860-1904).
- CHESTERTON**, Gilbert Keith (author); b. Kensington, Eng. (1874-1936).
- CHIPPENDALE**, Thomas (cabinetmaker); b. Otley, Eng. (1718?-1779).
- CHOPIN**, Frédéric François (composer); b. nr. Warsaw, Pol. (1810-1849).
- CICERO**, Marcus Tullius (orator & statesman); b. Arpinum, It. 106-43 B.C.).
- CLARK**, William (explorer); b. Caroline Co., Va. (1770-1838).
- CLAY**, Henry (statesman); b. Hanover Co., Va. (1777-1852).
- CLEMENCEAU**, Georges (statesman); b. Moulilleron-en-Pareds, Vendée, France (1841-1929).
- CLEMENS**, S. L. *See* Twain
- CLEOPATRA** (Queen of Egypt); b. Alexandria, Egy. (69-30 B.C.).
- COBB**, Irvin Shrewsbury (humorist); b. Paducah, Ky. (1876-1944).
- CODY**, W. F. *See* Buffalo Bill.
- COHAN**, George Michael (actor & dramatist); b. Providence, R. I. (1878-1942).
- COHEN**, Morris Raphael (philosopher & educator); b. Minsk, Rus. (1880-1947).
- COLERIDGE**, Samuel Taylor (poet); b. Ottery St. Mary, Dev., Eng. (1772-1834).
- COLLETTE** (Sidonie-Gabrielle Colette) (novelist); b. St.-Sauveur, Fr. (c.1873-1954).
- COLUMBUS**, Christopher (Cristoforo Colombo) (discoverer of America); b. Genoa (1451-1506).
- COMPTON**, Karl Taylor (physicist); b. Wooster, Ohio (1887-1954).
- CONFUCIUS** (K'ung Fu-tzu) (philosopher); b. Shantung prov., China (c. 551-479 B.C.).
- CONGREVE**, William (dramatist); b. nr. Leeds, Eng. (1670-1729).
- CONRAD**, Joseph (Teodor Józef Konrad Korzeniowski) (novelist); b. Berdichev, Ukraine (1857-1924).
- COOPER**, James Fenimore (novelist); b. Burlington, N. J. (1789-1851).
- COOPER**, Peter (industrialist & philanthropist); b. New York City (1791-1883).
- COPERNICUS**, Nicolaus (Mikolaj Kopernik) (astronomer); b. Thorn, Pol. (1473-1543).
- CORBETT**, James J. (boxer); b. San Francisco, Calif. (1866-1933).
- CORNEILLE**, Pierre (dramatist); b. Rouen, Fr. (1606-1684).
- COROT**, Jean Baptiste Camille (painter); b. Paris, Fr. (1796-1875).
- CORREGGIO**, Antonio Allegri da (painter); b. Correggio, It. (1494-1534).
- CORTÉS** (or CORTEZ), Hernando (explorer); b. Medellin, Sp. (1485-1547).
- COWL**, Jane (Jane Cowles) (actress); b. Boston, Mass. (1884-1950).
- COWPER**, William (poet); b. Great Berkhamstead, Herts., Eng. (1731-1800).
- CRANE**, Stephen (novelist & poet); b. Newark, N. J. (1871-1900).
- CROCE**, Benedetto (philosopher); b. Pescasseroli, Aquila, It. (1866-1952).
- CROCKETT**, Davy (David) (frontiersman); b. Greene Co., Tenn. (1786-1836).
- CURIE**, Marie (Marja Skłodowska) (physical chemist); b. Warsaw, Pol. (1867-1934).
- CURIE**, Pierre (chemist); b. Paris, Fr. (1859-1906).
- CUSTER**, George Armstrong (army officer); b. New Rumley, Ohio (1839-1876).
- DAMROSCH**, Walter Johannes (orchestra conductor); b. Breslau, Ger. (1862-1950).
- DANA**, Charles Anderson (editor); b. Hinsdale, N. H. (1819-1897).
- D'ANNUNZIO**, Gabriele (soldier & author); b. Francaville al Mare, Pescara, It. (1863-1938).
- DANTE** (or DURANTE) ALIGHIERI (poet); b. Florence (1265-1321).
- DANTON**, Georges Jacques (French Revolutionary leader); b. Arcis-sur-Aube, Fr. (1759-1794).
- DARROW**, Clarence Seward (lawyer); b. Kinsman, Ohio (1857-1938).
- DARWIN**, Charles Robert (naturalist); b. Shrewsbury, Shrops., Eng. (1809-1882).
- DAUMIER**, Honoré (caricaturist); b. Marseille, Fr. (1808-1879).
- DAVID** (King of Israel & Judah) (died c.973 B.C.).
- DAVIDSON**, Jo (sculptor); b. New York City (1883-1952).
- DAVIS**, Jefferson (Pres. of Confederacy); b. Christian (now Todd) Co., Va. (1808-1889).
- DEAN**, James (actor); b. Marion, Ind. (1931-1955).

- DEBS, Eugene Victor (Socialist leader); b. Terre Haute, Ind. (1855-1926).
- DEBUSSY, Claude Achille (composer); b. St. Germain-en-Laye, Fr. (1862-1918).
- DEFOE, Daniel (novelist); b. London, Eng. (1659?-1731).
- DEGAS, Hilaire Germain Edgar (painter); b. Paris, Fr. (1834-1917).
- DEMOSTHENES (orator); b. Athens (385?-322 B.C.).
- DESCARTES, René (philosopher & mathematician); b. La Haye, Fr. (1596-1650).
- DE SOTO, Hernando (explorer); b. Barcarota, Sp. (1500?-1542).
- DE VOTO, Bernard (author); b. Ogden, Utah (1897-1955).
- DEWEY, George (naval officer); b. Montpelier, Vt. (1837-1917).
- DEWEY, John (philosopher & educator); b. Burlington, Vt. (1859-1952).
- DICKENS, Charles John Huffam (novelist); b. Portsea, Eng. (1812-1870).
- DICKINSON, Emily Elizabeth (poet); b. Amherst, Mass. (1830-1886).
- DIOGENES (philosopher); b. Sinope, Asia Minor (412?-323 B.C.).
- DISRAELI, Benjamin (statesman); b. London, Eng. (1804-1881).
- DODGSON, C. L. See Carroll, Lewis.
- DONNE, John (poet); b. London, Eng. (1573-1631).
- DOSTOEVSKI, Fyodor Mikhailovich (novelist); b. Moscow, Rus. (1821-1881).
- DOUGLAS, Stephen Arnold (politician); b. Brandon, Vt. (1813-1861).
- DOYLE, Sir Arthur Conan (novelist & spiritualist); b. Edinburgh, Scot. (1859-1930).
- DRAKE, Sir Francis (navigator); b. Tavistock, Devons., Eng. (1545?-1596).
- DREISER, Theodore (novelist); b. Terre Haute, Ind. (1871-1945).
- DRESSLER, Marie (Leila Koerber) (actress); b. Cobourg, Ont., Can. (1869-1934).
- DREYFUS, Alfred (French army officer); b. Alsace (1859-1935).
- DRYDEN, John (poet); b. Northamptonshire, Eng. (1631-1700).
- DUMAS, Alexandre (called Dumas père) (novelist); b. Villers-Cotterets, Fr. (1802-1870).
- DUMAS, Alexandre (called Dumas fils) (novelist); b. Paris, Fr. (1824-1895).
- DU MAURIER, George Louis Palmella Busson (novelist); b. Paris, Fr. (1834-1896).
- DUNCAN, Isadora (dancer); b. San Francisco, Calif. (1878-1927).
- DUSE, Eleonora (actress); b. Chioggia, It. (1859-1924).
- DVOŘÁK, Antonín (composer); b. Mühldhausen, Bohemia (1841-1904).
- EARHART, Amelia (aviator); b. Atchison, Kans. (1898-1937).
- EDDY, Mary Morse (nee Baker) (religious leader); b. Bow, N. H. (1821-1910).
- EDISON, Thomas Alva (inventor); b. Milan, Ohio (1847-1931).
- EDMAN, Irwin (philosopher); b. New York City (1896-1954).
- EHRLICH, Paul (bacteriologist); Silesia prov., Prus. (1854-1915).
- EINSTEIN, Albert (physicist); b. Ulm, Ger. (1879-1955).
- ELGAR, Sir Edward (composer); b. Worcester, Eng. (1857-1934).
- ELIOT, George (Mary Ann Evans) (novelist); b. Warwickshire, Eng. (1819-1880).
- EMERSON, Ralph Waldo (philosopher & poet); b. Boston, Mass. (1803-1882).
- ENESCO, Georges (composer); b. Dorohol Rm. (1881-1955).
- ENGELS, Friedrich (Socialist writer); b. Barmen, Ger. (1820-1895).
- EPICURUS (philosopher); b. Samos (342?-270 B.C.).
- ERASMUS, Desiderius (Gerhard Gerhards) (scholar); b. Rotterdam (1466?-1536).
- ERICSON, Lief (navigator) (c.10th cent. A.D.).
- EUCLID (mathematician) (c.300 B.C.).
- EURIPIDES (dramatist); b. Salamis (c. 484-407 B.C.).
- FAIRBANKS, Douglas (actor); b. Denver, Colo. (1883-1939).
- FALLA, Manuel de (composer); b. Cadiz, Sp. (1876-1946).
- FARADAY, Michael (physicist); b. Newington, Sur., Eng. (1791-1867).
- FERRI, Enrico (physicist); b. Rome, It. (1901-1954).
- FIELD, Eugene (poet); b. St. Louis, Mo. (1850-1895).
- FIELDING, Henry (novelist); b. nr. Glastonbury, Som., Eng. (1707-1754).
- FIELDS, W. C. (Claude William Dukenfield) (actor); b. Philadelphia, Pennsylvania (1880-1946).
- FISKE, Minnie Madderp (nee Davey) (actress); b. New Orleans, La. (1865-1932).
- FITZGERALD, Francis Scott Key (novelist); b. St. Paul, Minn. (1896-1940).
- FITZSIMMONS, Robert Prometheus (boxer); b. Cornwall, Eng. (1862-1917).
- FLAUBERT, Gustave (novelist); b. Rouen, Fr. (1821-1880).
- FLEMING, Sir Alexander (bacteriologist); b. Lochfield, Scot. (1881-1955).
- FORD, Henry (industrialist); b. Greenfield, Mich. (1863-1947).
- FORRESTAL, James Vincent (statesman); b. Beacon, N. Y. (1892-1949).
- FOSTER, Stephen Collins (composer); b. nr. Pittsburgh, Pa. (1826-1864).
- FRANCE, Anatole (Jacques Anatole François Thibault) (author); b. Paris (1844-1924).
- FRANKLIN, Benjamin (statesman & scientist); b. Boston, Mass. (1706-1790).
- FRAZER, Sir James George (anthropologist); b. Glasgow, Scot. (1854-1941).
- FREUD, Sigmund (psychoanalyst); b. Freiberg, Moravia (1856-1939).
- FULTON, Robert (inventor); b. Lancaster, Co., Pa. (1765-1815).
- GAWSBOROUGH, Thomas (painter); b. Sudbury, Suff., Eng. (1727-1788).
- GALILEI, Galileo (astronomer & physicist); b. Pisa, It. (1564-1642).
- GALSWORTHY, John (novelist & dramatist); b. Coombe, Sur., Eng. (1867-1933).
- GANDHI, Mohandas Karamchand (called Mahatma Gandhi) (Hindu leader); b. Porbandar, India (1869-1948).

- GARIBALDI**, Giuseppe (Italian nationalist leader); b. Nice, Fr. (1807-1882).
- GARRICK**, David (actor); b. Hereford, Heref., Eng. (1717-1779).
- GARRISON**, William Lloyd (abolitionist); b. Newburyport, Mass. (1805-1879).
- GAUGUIN**, Eugène Henri Paul (painter); b. Paris, Fr. (1848-1903).
- GAUTAMA BUDDHA** (Prince Siddhartha) (philosopher); b. Kapilavastu, India (563?-483 B.C.).
- GEHRIG**, Lou (Henry Louis Gehrig) (baseball player); b. New York City (1903-1941).
- GENGHIS KHAN** (Temujin) (conqueror); b. nr. Lake Balkal in Asia (1162-1227).
- GEORGE**, Henry (economist); b. Philadelphia, Pa. (1839-1897).
- GERONIMO** (Goyathlay) (Apache chieftain); b. Arizona (1829-1909).
- GERSHWIN**, George (composer); b. Brooklyn, N. Y. (1898-1937).
- GIBBON**, Edward (historian); b. Putney, Eng. (1737-1794).
- GIBSON**, Charles Dana (illustrator); b. Roxbury, Mass. (1867-1944).
- GIDE**, André (author); b. Paris, Fr. (1869-1951).
- GILBERT**, Sir William Schwenck (dramatist & librettist); b. London, England (1836-1911).
- GIOTTO di Bondone** (painter); b. Vespignano, It. (1276?-1337).
- GLADSTONE**, William Ewart (statesman); b. Liverpool, Eng. (1809-1898).
- GLUCK**, Christoph Willibald (composer); b. Erasbach, Bavaria (1714-1787).
- GOEBBELS**, Joseph Paul (Nazi leader); b. Rheydt, Ger. (1897-1945).
- GOERING**, Hermann (Nazi leader); b. Rosenheim, Bavaria (1893-1946).
- GOETHALS**, George Washington (engineer); b. Brooklyn, N. Y. (1858-1928).
- GOETHE**, Johann Wolfgang von (poet); b. Frankfurt am Main, Ger. (1749-1832).
- GOGH**, Vincent van (painter); b. Groot-Zundert, Brabant, Hol. (1853-1890).
- GOGOL**, Nikolai Vasilievich (novelist); b. nr. Mirgorod, Poltava, Ukr. (1809-1852).
- GOLDSMITH**, Oliver (dramatist & poet); b. County Longford, Ire. (1728-1774).
- GOMPERS**, Samuel (labor leader); b. London, Eng. (1850-1924).
- GOODYEAR**, Charles (inventor); b. New Haven, Conn. (1800-1860).
- GORKI**, Maxim (Alexei Maximovich Peshkov) (author); b. Nizhni Novgorod, Rus. (1868-1936).
- GOULD**, Jay (Jason) (financier); b. Roxbury, N. Y. (1836-1892).
- GOUNOD**, Charles François (composer); b. Paris, Fr. (1818-1893).
- GOYA Y LUCIENTES**, Francisco José de (painter); b. Fuendetodos, Sp. (1746-1828).
- GRAY**, Thomas (poet); b. London, Eng. (1716-1771).
- GREGO**, El (Domenicos Theotocopoulos) (painter); b. Candia, Crete (c.1542-1614).
- GREELEY**, Horace (journalist & politician); b. Amherst, N. H. (1811-1872).
- GRIEG**, Edvard Hagerup (composer); b. Bergen, Nor. (1843-1907).
- GRIFFITH**, David Lewelyn Wark (movie producer); b. La Grange, Ky. (1875-1948).
- GRIMM**, Jacob (mythologist); b. Hanau, Ger. (1785-1863).
- GRIMM**, Wilhelm (mythologist); b. Hanau, Ger. (1786-1859).
- GUTENBERG**, Johann (printer); b. Mainz, Ger. (1400?-1468).
- HALE**, Nathan (American Revolutionary officer); b. Coventry, Conn. (1755-1776).
- HALS**, Frans (painter); b. Antwerp, Hol. (1580?-1666).
- HAMILTON**, Alexander (statesman); b. Lee-ward Is. (1757?-1804).
- HANCOCK**, John (statesman); b. Braintree, Mass. (1737-1793).
- HANDEL**, George Frederick (composer); b. Halle, Ger. (1685-1759).
- HANNIBAL** (Carthaginian general) (247-183 B.C.).
- HARDY**, Thomas (novelist); b. Dorsetshire, Eng. (1840-1928).
- HARLOW**, Jean (Harlean Carpenter) (actress); b. Kansas City, Mo. (1911-1937).
- HARTE**, Bret (Francis Brett Harte) (author); b. Albany, N. Y. (1836-1902).
- HARVEY**, William (physician); b. Folkestone, Kent, Eng. (1578-1657).
- HAWTHORNE**, Nathaniel (novelist); b. Salem, Mass. (1804-1864).
- HAY**, John Milton (statesman); b. Salem, Ind. (1838-1905).
- HAYDN**, Franz Joseph (composer); b. Rohrau, Aus. (1732-1809).
- HEARST**, William Randolph (publisher); b. San Francisco, Calif. (1863-1951).
- HEGEL**, Georg Wilhelm Friedrich (philosopher); b. Stuttgart, Ger. (1770-1831).
- HEINE**, Heinrich (Harry) (poet); b. Düsseldorf, Ger. (1797-1856).
- HENRY**, O. (William Sydney Porter) (story writer); b. Greensboro, N. C. (1862-1910).
- HENRY**, Patrick (statesman); b. Hanover Co., Va. (1736-1799).
- HEPPLEWHITE**, George (furniture designer) b. England (?-1786).
- HERBERT**, Victor (composer); b. Dublin, Ire. (1859-1924).
- HEROD** (Herodes) (called Herod the Great) (King of Judea) (73?-4 B.C.).
- HERODOTUS** (historian); b. Halicarnassus, Asia Minor (c.484-425 B.C.).
- HERSHOLT**, Jean (actor); b. Copenhagen, Den. (1886-1956).
- HINDENBURG**, Paul von (Paul Ludwig Hans Anton von Beneckendorff und von Hindenburg) (statesman); b. Posen, Prus. (1847-1934).
- HIPPOCRATES** (physician); b. Kos, Dodecanese (460?-377 B.C.).
- HITLER**, Adolf (Adolf Schicklgruber) (German dictator); b. Braunau, Aus. (1889-1945).
- HOGARTH**, William (painter & engraver); b. London, Eng. (1697-1764).
- HOLBEIN**, Hans (the Elder) (painter); b. Augsburg, Bavaria (1465?-1524).
- HOLBEIN**, Hans (the Younger) (painter); b. Augsburg, Bavaria (1497?-1543).
- HOLMES**, Oliver Wendell (author); b. Cambridge, Mass. (1809-1894).



- HOLMES, Oliver Wendell** (jurist); b. Boston, Mass. (1841-1935).
- HOMER** (Greek poet) (c.850 B.C.).
- HOMER, Winslow** (painter); b. Boston, Mass. (1836-1910).
- HONEGGER, Arthur** (composer); b. Le Havre, Fr. (1892-1955).
- HORACE** (Quintus Horatius Flaccus) (poet); b. Venosa, Lucania (65-8 B.C.).
- HOUDINI, Harry** (Ehrich Weiss) (magician); b. Appleton, Wis. (1874-1926).
- HOUSMAN, Alfred Edward** (poet); b. Fockburg, Worcs., Eng. (1859-1936).
- HOUSTON, Samuel** (political leader); b. Rockbridge Co., Va. (1793-1863).
- HOWARD, Leslie** (actor); b. London, Eng. (1893-1943).
- HOWE, Elias** (inventor); b. Spencer, Mass. (1819-1867).
- HOWELLS, William Dean** (author); b. Martin's Ferry, Ohio (1837-1920).
- HUDSON, Henry** (English navigator) (?-1611).
- HUGHES, Charles Evans** (jurist); b. Glens Falls, N. Y. (1862-1948).
- HUGO, Victor Marie** (author); b. Besançon, Fr. (1802-1885).
- HUME, David** (philosopher); b. Edinburgh, Scot. (1711-1776).
- HUSTON, Walter** (actor); b. Toronto, Ont., Can. (1884-1950).
- HUXLEY, Thomas Henry** (biologist); b. Ealing, Eng. (1825-1895).
- IBSEN, Henrik** (dramatist); b. Skien, Nor. (1828-1906).
- INNESS, George** (painter); b. nr. Newburgh, N. Y. (1825-1894).
- IRVING, Washington** (author); b. New York City (1783-1859).
- JACKSON, Thomas Jonathan** (general); b. Clarksburg, Va. (now West Virginia) (1824-1863).
- JAMES, Henry** (novelist); b. New York City (1843-1916).
- JAMES, Jesse Woodson** (outlaw); b. Clay Co., Mo. (1847-1882).
- JAMES, William** (psychologist); b. New York City (1842-1910).
- JANIS, Elsie** (Elsie Bierbower) (actress); b. Columbus, Ohio (1889-1956).
- JAY, John** (statesman & jurist); b. New York City (1745-1829).
- JEFFERSON, Joseph** (actor); b. Philadelphia, Pa. (1829-1905).
- JEFFRIES, James J.** (boxer); b. Carroll, Ohio (1875-1953).
- JENNER, Edward** (physician); Berkeley, Glos., Eng. (1749-1823).
- JOAN OF ARC** (Jeanne d'Arc) (saint & patriot); b. Domremy-la-Pucelle, Fr. (1412-1431).
- JOHNSON, Jack** (John A.) (boxer); b. Galveston, Tex. (1878-1946).
- JOHNSON, Samuel** (lexicographer & author); b. Lichfield, Staffs., Eng. (1709-1784).
- JOLIOT-CURIE, Irène** (Irène Curie) (physicist); b. France (1897-1956).
- JOLLIET** (or JOLIET), Louis (explorer); b. Beaupré, Can. (1645-1700).
- JOLSON, Al** (Asa Yoelson) (actor & singer); b. St. Petersburg, Rus. (1886-1950).
- JONES, John Paul** (John Paul) (naval officer); b. Scotland (1747-1792).
- JONSON, Ben** (Benjamin) (poet & dramatist); b. Westminster, England (1573?-1637).
- JOYCE, James** (novelist); b. Dublin, Ire. (1882-1941).
- JUÁREZ, Benito Pablo** (statesman); b. Guelatao, Oaxaca, Mex. (1806-1872).
- KANT, Immanuel** (philosopher); b. Königsberg, Prus. (1724-1804).
- KEATS, John** (poet); b. London, Eng. (1795-1821).
- KEMAL ATATÜRK** (Mustafa Kemal) (statesman); b. Salonika, Turk. (1881-1938).
- KEPLER, Johannes** (astronomer); b. Well, Württemberg, Ger. (1571-1630).
- KERN, Jerome David** (composer); b. New York City (1885-1945).
- KEY, Francis Scott** (lawyer); b. Frederick (now Carroll) Co., Md. (1779-1843).
- KIDD, William** (called Capt. Kidd) (pirate); b. Greenock, Scot. (1645?-1701).
- KILMER, Alfred Joyce** (poet); b. New Brunswick, N. J. (1886-1918).
- KIPLING, Rudyard** (author); b. Bombay, India (1865-1936).
- KNOX, John** (religious reformer); b. Haddington, E. Lothian, Scot. (1505-1572).
- KOSCIUSKO, Thaddeus** (Tadeusz Andrzej Bonawentura Kościuszko) (military officer); b. province of Lithuania, Poland (1746-1817).
- KOUSSEVITZKY, Serge** (Sergei) Alexandrovitch (orchestra conductor); b. Russia (1874-1951).
- KUBLAI KHAN** (Mongol conqueror) (1216-1294).
- LA FAYETTE, Marquis de** (Marie Joseph Paul Yves Roch Gilbert du Motier) (military officer); b. Auvergne, Fr. (1757-1834).
- LA FOLLETTE, Robert Marin** (politician); b. Primrose, Wis. (1855-1925).
- LA GUARDIA, Fiorello Henry** (politician); b. New York City (1882-1947).
- LAMARCK, Chevalier de** (Jean Baptiste Pierre Antoine de Monet) (naturalist); b. Bazantin, Picardy (1744-1829).
- LAMB, Charles** (essayist); b. London, Eng. (1775-1834).
- LANDIS, Kenesaw Mountain** (jurist); b. Millville, Ohio (1866-1944).
- LANGTRY, Lily** (nee Emily Le Breton) (actress); b. island of Jersey (1852-1929).
- LAO-TZU** (or LAO-TSE) (Li Erh) (philosopher); b. Honan prov., China (c.604-531 B.C.).
- LARDNER, Ring** (Ringgold Wilmer Lardner) (story writer); b. Niles, Mich. (1885-1933).
- LA SALLE, Sieur de** (Robert Cavalier) (explorer); b. Rouen, Fr. (1643-1687).
- LAUDER, Sir Harry** (Harry MacLennan) (singer); b. Portobello, Scot. (1870-1950).
- LAVOISIER, Antoine Laurent** (chemist); b. Paris, Fr. (1743-1794).
- LAWRENCE, David Herbert** (novelist); b. Nottingham, Eng. (1885-1930).
- LAWRENCE, Gertrude** (Gertrud Klasen) (actress); b. London, Eng. (1900-1952).

- LAWRENCE OF ARABIA** (Thomas Edward Lawrence; later changed name to Shaw); (author & soldier); b. Portmadoc, Wales (1888-1935).
- LEAR**, Edward (nonsense poet); b. London, Eng. (1812-1888).
- LEE**, Robert Edward (Confederate general); b. Stratford Estate, Va. (1807-1870).
- LEHÁR**, Franz (composer); b. Komárom, Hung. (1870-1948).
- LENIN**, Nikolai (Vladimir Ilich Ulyanov) (statesman); b. Simbirsk, Rus. (1870-1924).
- LEONARD**, Benny (Benjamin Lelner) (boxer); b. New York City (1896-1947).
- LEWIS**, Meriwether (explorer); b. Albemarle Co., Va. (1774-1809).
- LEWIS**, Sinclair (novelist); b. Sauk Centre, Minn. (1885-1951).
- LIND**, Jenny (Johanna Maria Lind) (soprano); b. Stockholm, Swed. (1820-1887).
- LINDSAY**, Nicholas Vachel (poet); b. Springfield, Ill. (1879-1931).
- LISTER**, Joseph (surgeon); b. Upton, Essex, Eng. (1827-1912).
- LISZT**, Franz (composer & pianist); b. Raiding, Hung. (1811-1886).
- LIVINGSTONE**, David (missionary & explorer); b. Lanarkshire, Scot. (1813-1873).
- LLOYD GEORGE**, David (statesman); b. Manchester, Eng. (1863-1945).
- LOCKE**, John (philosopher); b. Somersetshire, Eng. (1632-1704).
- LODGE**, Henry Cabot (legislator); b. Boston, Mass. (1850-1924).
- LOMBARD**, Carole (Carol Jane Peters) (actress); b. Ft. Wayne, Ind. (1908-1942).
- LOMBROSO**, Cesare (criminologist); b. Verona, It. (1836-1909).
- LONDON**, Jack (novelist); b. San Francisco, Calif. (1876-1916).
- LONG**, Huey Pierce (politician); b. Winnfield, La. (1893-1935).
- LONGFELLOW**, Henry Wadsworth (poet); b. Portland, Maine (1807-1882).
- LOWELL**, Amy (poet); b. Brookline, Mass. (1874-1925).
- LOWELL**, James Russell (poet); b. Cambridge, Mass. (1819-1891).
- LOYOLA**, St. Ignatius of (Inigo de Onex y Loyola) (founder of Jesuits); b. Gúlpuzcoa prov., Sp. (1491-1556).
- LUBITSCH**, Ernst (movie director); b. Berlin, Ger. (1892-1947).
- LUDENDORFF**, Erich Friedrich Wilhelm (general); b. Kruszevnia, Posen, Ger. (1865-1937).
- LUTHER**, Martin (religious reformer); b. Eisleben, Ger. (1483-1546).
- MacARTHUR**, Charles (dramatist); b. Scranton, Pa. (1895-1956).
- MACAULAY**, Thomas Babington (author); b. Leicestershire, Eng. (1800-1859).
- MacDONALD**, James Ramsay (statesman); b. Lossiemouth, Scot. (1866-1937).
- MacDOWELL**, Edward Alexander (composer); b. New York City (1861-1908).
- MACFADDEN**, Bernarr (physical culturist); b. nr. Mill Spring, Mo. (1868-1955).
- MACHIAVELLI**, Niccolò (political philosopher); b. Florence (1469-1527).
- MACK**, Connie (Cornelius McGillicuddy) (baseball executive); b. East Brookfield, Mass. (1862-1956).
- MAETERLINCK**, Count Maurice (author); b. Ghent, Belg. (1862-1949).
- MAGELLAN**, Ferdinand (Fernando de Magalhães) (navigator); b. Sabrosa, Port. (1480?-1521).
- MAHAN**, Alfred Thayer (naval historian); b. West Point, N. Y. (1840-1914).
- MAHLER**, Gustav (composer & conductor); b. Kalischt, Bohemia (1860-1911).
- MANET**, Édouard (painter); b. Paris, Fr. (1832-1883).
- MANN**, Horace (educator); b. Franklin, Mass. (1796-1859).
- MANN**, Thomas (novelist); b. Lübeck, Ger. (1875-1955).
- MANSFIELD**, Katherine (story writer); b. Wellington, N. Z. (1888-1923).
- MARAT**, Jean Paul (French revolutionist); b. Boudry, Neuchâtel, Switzerland (1743-1793).
- MARCONI**, Guglielmo (inventor); b. Bologna, It. (1874-1937).
- MARCUS AURELIUS** (Marcus Annius Verus) (Roman emperor); b. Rome (121-180).
- MARIE ANTOINETTE** (Joséphine Jeanne Marie Antoinette) (Queen of France); b. Vienna, Aus. (1755-1793).
- MARKHAM**, Charles Edwin (poet); b. Oregon City, Oreg. (1852-1940).
- MARLOWE**, Christopher (dramatist); b. Canterbury, Eng. (1564-1593).
- MARLOWE**, Julia (Sarah Frost) (actress); b. Cumberlandshire, Eng. (1866-1950).
- MARQUETTE**, Jacques (missionary & explorer); b. Laon, Fr. (1637-1675).
- MARSHALL**, John (jurist); b. nr. Germantown, Va. (1755-1835).
- MARX**, Karl (Socialist writer); b. Treves, Prus. (1818-1883).
- MARY STUART** (Queen of Scotland); b. Linlithgow, Scot. (1542-1587).
- MASARYK**, Thomas Garrigue (statesman); b. Moravia (1850-1937).
- MASSENET**, Jules Émile Frédéric (composer); b. Montaud, Fr. (1832-1912).
- MASTERS**, Edgar Lee (poet); b. Garnett, Kans. (1869-1950).
- MATISSE**, Henri (painter); b. Cateau, Fr. (1869-1954).
- MAUPASSANT**, Henri René Albert Guy de (story writer); b. Normandy, Fr. (1850-1893).
- MAXIMILIAN** (Ferdinand Maximilian Joseph) (Emperor of Mexico); b. Vienna, Aus. (1832-1867).
- MAXWELL**, James Clerk (physicist); b. Edinburgh, Scot. (1831-1879).
- McCORMACK**, John (tenor); b. Athlone, Ire. (1884-1945).
- McCORMICK**, Cyrus Hall (inventor); b. Rockbridge Co., Va. (1809-1884).
- McGRAW**, John J. (baseball manager); b. Truxton, N. Y. (1875-1934).
- MEDICI**, Lorenzo de' (called Lorenzo the Magnificent) (Florentine ruler); b. Florence (1449-1492).
- MELBA**, Nellie (Helen Porter Mitchell) (soprano); b. nr. Melbourne, Australia (1861-1931).

- MELLON, Andrew William** (financier); b. Pittsburgh, Pa. (1855-1937).
- MELVILLE, Herman** (novelist); b. New York City (1819-1891).
- MENCKEN, Henry Louis** (author); b. Baltimore, Md. (1880-1956).
- MENDEL, Gregor Johann** (botanist); b. Heinzendorf, Silesia (1822-1884).
- MENDELEYEV, Dmitri Ivanovich** (chemist); b. Tobolsk, Siberia (1834-1907).
- MENDELSSOHN-BARTHOLDY, Jakob Ludwig Felix** (composer); b. Hamburg, Ger. (1809-1847).
- MESMER, Franz Anton** (physician); b. Well, Aus. (1734-1815).
- METTERNICH, Prince Klemens Wenzel Nepomuk Lothar von** (statesman); b. Coblenz, Aus. (1773-1859).
- MICHELANGELO BUONARROTI** (painter & sculptor); b. Caprese, Tuscany, It. (1475-1564).
- MILL, John Stuart** (philosopher); b. London, Eng. (1806-1873).
- MILLAY, Edna St. Vincent** (poet); b. Rockland, Maine (1892-1950).
- MILLER, Glenn** (band leader); b. Clarinda, Iowa (1909?-1944).
- MILNE, Alan Alexander** (author); b. London, Eng. (1882-1956).
- MILTON, John** (poet); b. London, Eng. (1608-1674).
- MINUIT, Peter** (Governor of New Amsterdam); b. Wesel, Rhenish Prussia (1580-1638).
- MITCHELL, Margaret** (novelist); b. Atlanta, Ga. (1900-1949).
- MOHAMMED** (prophet); b. Mecca, Arabia (570-632).
- MOLIÈRE** (Jean Baptiste Poquelin) (dramatist); b. Paris, Fr. (1622-1673).
- MOLNÁR, Ferenc** (dramatist); b. Budapest, Hung. (1878-1952).
- MONET, Claude** (painter); b. Paris, Fr. (1840-1926).
- MONTAIGNE, Michel Eyquem de** (essayist); b. nr. Bordeaux, Fr. (1533-1592).
- MONTEZUMA II** (Aztec emperor); b. Mexico (1480?-1520).
- MOORE, Thomas** (poet); b. Dublin, Ire. (1779-1852).
- MORE, Sir Thomas** (statesman & author); b. London, Eng. (1478-1535).
- MORGAN, Helen** (singer); b. Danville, Ohio (1900?-1941).
- MORGAN, John Pierpont** (financier); b. Hartford, Conn. (1837-1913).
- MORSE, Samuel Finley Breese** (painter & inventor); b. Charlestown, Mass. (1791-1872).
- MOUSSORGSKY, Modest Petrovich** (composer); b. Karev, Rus. (1835-1881).
- MOZART, Wolfgang Amadeus** (Johannes Chrysostomus Wolfgangus Theophilus Mozart) (composer); b. Salzburg, Aus. (1756-1791).
- MURILLO, Bartolomé Esteban** (painter); b. Seville, Sp. (1617-1682).
- MUSSOLINI, Benito** (Italian dictator); b. Dovia, Forlì, It. (1883-1945).
- NAPOLEON BONAPARTE** (Emperor of the French); b. Ajaccio, Corsica (1769-1821).
- NAST, Thomas** (cartoonist); b. Landau, Ger. (1840-1902).
- NATION, Carry Amelia** (temperance leader); b. Garrard Co., Ky. (1846-1911).
- NELSON, Horatio** (naval officer); b. Burnham Thorpe, Norf., Eng. (1758-1805).
- NERO** (Nero Claudius Caesar Drusus Germanicus) (Roman emperor); b. Antium, Latium, It. (A.D. 37-68).
- NEWTON, Sir Isaac** (mathematician & scientist); b. nr. Grantham, Lincs., Eng. (1642-1727).
- NIETZSCHE, Friedrich Wilhelm** (philosopher); b. nr. Lützen, Saxony (1844-1900).
- NIGHTINGALE, Florence** (nurse); b. Florence, It. (1820-1910).
- NIJINSKY, Waslaw** (dancer); b. Kiev, Rus. (1890-1950).
- NOBEL, Alfred Bernhard** (industrialist); b. Stockholm, Swed. (1833-1896).
- NOSTRADAMUS** (Michel de Notredame) (astrologer); b. St. Remi, Fr. (1503-1566).
- OGHS, Adolph Simon** (publisher); b. Cincinnati, Ohio (1858-1935).
- OFFENBACH, Jacques** (composer); b. Cologne, Ger. (1819-1880).
- OMAR KHAYYĀM** (poet & astronomer); b. Nishapur, Khurasan, Persia (died c. 1123).
- O'NEILL, Eugene Gladstone** (dramatist); b. New York City (1888-1953).
- OROZCO, José Clemente** (painter); b. Zapotlán, Jalisco, Mex. (1883-1949).
- OSLER, Sir William** (physician); b. Bondhead, Ont., Can. (1849-1919).
- OVID** (Publius Ovidius Naso) (poet); b. Sulmona, It. (43 B.C.-?A.D. 17).
- PADEREWSKI, Ignace Jan** (pianist & statesman); b. Podolia prov., Pol. (1860-1941).
- PAGANINI, Nicolò** (violinist); b. Genoa, It. (1782-1840).
- PAINE, Thomas** (political philosopher); b. Thetford, Eng. (1737-1809).
- PARNELL, Charles Stewart** (Irish nationalist leader); b. Avondale, Wicklow, Ire. (1822-1895).
- PASCAL, Blaise** (philosopher); b. Clermont, Fr. (1623-1662).
- PASTEUR, Louis** (chemist); b. Dole, Jura, Fr. (1822-1895).
- PAVLOV, Ivan Petrovich** (physiologist); b. Ryazan dist., Rus. (1849-1936).
- PAVLOVA, Anna** (dancer); b. St. Petersburg, Rus. (1885-1931).
- PEARY, Robert Edwin** (explorer); b. Crescor, Pa. (1856-1920).
- PENN, William** (American colonist); b. London, Eng. (1644-1718).
- PEPYS, Samuel** (diarist); b. Cambridge, Eng. (1633-1703).
- PERICLES** (statesman); b. Athens (died 429 B.C.).
- PERÓN, María Eva Duarte de** (political leader); b. Los Toldos, Arg. (1919-1952).
- PERSHING, John Joseph** (general); b. Lincoln Co., Mo. (1860-1948).
- PETRARCH** (Francesco Petrarca) (poet); b. Arezzo, It. (1304-1374).
- PIKE, Zebulon Montgomery** (explorer); b. Lambertton, N. J. (1779-1813).



- PIRANDELLO**, Luigi (dramatist & novelist); b. nr. Girgenti, Sicily (1867-1936).
- PITT**, William ("Younger Pitt") (statesman); b. nr. Bromley, Eng. (1759-1806).
- PIZARRO**, Francisco (explorer); b. Trujillo, Sp. (1470?-1541).
- PLATO** (Aristocles) (philosopher); b. Athens (?) (427?-347 B.C.).
- PLUTARCH** (biographer); b. Chaeronea, Boeotia (A.D. 46?-120).
- POCAHONTAS** (Matoaka) (American Indian princess); b. Virginia (?) (1595?-1617).
- POE**, Edgar Allan (poet & story writer); b. Boston, Mass. (1809-1849).
- POLO**, Marco (traveler); b. Venice (1254?-1324).
- POMPEY** (Gnaeus Pompeius Magnus) (general); b. Rome (?) (106-48 B.C.).
- PONCE de LEÓN**, Juan (explorer); b. Servas, Sp. (1460?-1521).
- POPE**, Alexander (poet); b. London, Eng. (1688-1744).
- POST**, Wiley (aviator); b. Texas (1900-1935).
- PRIESTLEY**, Joseph (chemist); b. nr. Leeds, Eng. (1733-1804).
- PROKOFIEFF**, Sergei Sergeevich (composer); b. St. Petersburg, Rus. (1891-1953).
- PROUST**, Marcel (novelist); b. Paris, Fr. (1871-1922).
- PTOLEMY** (Claudius Ptolemaeus) (astronomer & geographer); b. Ptolemais Hermii (2nd century A.D.).
- PUCCINI**, Giacomo (composer); b. Lucca, It. (1858-1924).
- PULITZER**, Joseph (publisher); b. Makó, Hung. (1847-1911).
- PUSHKIN**, Alexander Sergeevich (poet & dramatist); b. Moscow, Rus. (1799-1837).
- PYLE**, Ernest Taylor (journalist); b. Wilmington, Del. (1900-1945).
- PYTHAGORAS** (mathematician & philosopher); b. Samos (6th century B.C.).
- RABELAIS**, François (satirist); b. nr. Chinon, Fr. (1494?-1553).
- RACHMANINOFF**, Sergei Wassilievitch (pianist & composer); b. Oneg Estate, Novgorod, Rus. (1873-1943).
- RACINE**, Jean Baptiste (dramatist); b. La Ferté-Milon, Fr. (1639-1699).
- RALEIGH**, Sir Walter (courtier & navigator); b. London, Eng. (1552?-1618).
- RAPHAEL** (Raffaello Santi) (painter); b. Urbino, It. (1483-1520).
- RASPUTIN**, Grigori Efimovich (monk); b. Tobolsk prov., Siberia (1871?-1916).
- RAVEL**, Maurice Joseph (composer); b. Ciboure, Fr. (1875-1937).
- REED**, Walter (army surgeon); b. Belroi, Va. (1851-1902).
- REID**, Whitelaw (journalist & diplomat); b. nr. Xenia, Ohio (1837-1912).
- REINHARDT**, Max (Max Goldmann) (theater producer); b. nr. Vienna, Aus. (1873-1943).
- REMBRANDT** (Harmensz van Rijn Rembrandt) (painter); b. Leyden, Hol. (1606-1669).
- RENOIR**, Pierre Auguste (painter); b. Limoges, Fr. (1841-1919).
- RESPIGHI**, Ottorino (composer); b. Bologna, It. (1879-1936).
- REVERE**, Paul (silversmith); b. Boston, Mass. (1735-1818).
- REYNOLDS**, Sir Joshua (painter); b. nr. Plymouth, Eng. (1723-1792).
- RHODES**, Cecil John (South African statesman); b. Bishop Stortford, Herts., Eng. (1853-1902).
- RICE**, Grantland (sports writer); b. Murfreesboro, Tenn. (1880-1954).
- RICHELIEU**, Duc de (Armand Jean du Plessis) (cardinal); b. Paris (1585-1642).
- RILEY**, James Whitcomb (poet); b. Greenfield, Ind. (1849-1916).
- RIMSKI-KORSAKOV**, Nikolai Andreevich (composer); b. Tikhvin, Rus. (1844-1908).
- ROBESPIERRE**, Maximilien François Marie Isidore de (French Revolutionist); b. Arras, Fr. (1758-1794).
- ROBINSON**, Bill (Luther) (dancer); b. Richmond, Va. (1878-1949).
- ROBINSON**, Edwin Arlington (poet); b. Head Tide, Maine (1869-1935).
- ROCKEFELLER**, John Davidson (capitalist); b. Richford, N. Y. (1839-1937).
- ROCKNE**, Knute Kenneth (football coach); b. Voss, Nor. (1888-1931).
- RODIN**, François Auguste René (sculptor); b. Paris, Fr. (1840-1917).
- ROENTGEN**, Wilhelm Konrad (physicist); b. Lenep, Prus. (1845-1923).
- ROGERS**, Will (William Penn Adair Rogers) (humorist); b. Oologah, Okla. (1879-1935).
- ROLLAND**, Romain (author); b. Clamecy, Fr. (1866-1944).
- ROMBERG**, Sigmund (composer); b. Hungary (1887-1951).
- ROSSETTI**, Dante Gabriel (painter & poet); b. London, Eng. (1828-1882).
- ROSSINI**, Gioacchino Antonio (composer); b. Pesaro, It. (1792-1868).
- ROSTAND**, Edmond (dramatist); b. Marseilles, Fr. (1868-1918).
- ROUSSEAU**, Jean Jacques (philosopher); b. Geneva, Switz. (1712-1778).
- RUBENS**, Peter Paul (painter); b. Siegen, Westphalia (1577-1640).
- RUNYON**, Alfred Damon (journalist); b. New York City (1880-1946).
- RUSKIN**, John (art critic); b. London, Eng. (1819-1900).
- RUSSELL**, Lillian (Helen Louise Leonard) (soprano); b. Clinton, Iowa (1861-1922).
- RUTH**, Babe (George Herman Ruth) (baseball player); b. Baltimore, Md. (1895-1948).
- SAINT-GAUDENS**, Augustus (sculptor); b. Dublin, Ire. (1848-1907).
- SAINT-SAËNS**, Charles Camille (composer); b. Paris, Fr. (1835-1921).
- SAND**, George (Amandine Lucille Aurore Dudevant, nee Dupin) (novelist); b. Paris, Fr. (1803-1876).
- SANTAYANA**, George (philosopher); b. Madrid, Sp. (1863-1952).
- SAPPHO** (poet); b. Lesbos (lived c.600 B.C.).
- SARGENT**, John Singer (painter); b. Florence, It., of American parents (1856-1925).
- SARTO**, Andrea del (Andrea Domenico d'Agnolo di Francesco) (painter); b. Florence (1486-1531).
- SAUL** (King of Israel) (11th century B.C.).

- SCHILLER**, Johann Christoph (dramatist); b. Marbach, Wurttemberg, Ger. (1759-1805).
- SCHÖNBERG**, Arnold (composer); Vienna, Aus. (1874-1951).
- SCHOPENHAUER**, Arthur (philosopher); b. Danzig (1788-1860).
- SCHUBERT**, Franz Peter (composer); b. Vienna, Aus. (1797-1826).
- SCHUMANN**, Robert Alexander (composer); b. Zwickau, Saxony, Ger. (1810-1856).
- SCHUMANN-HEINK**, Ernestine (nee Roessler) (contralto); b. nr. Prague, Boh. (1861-1936).
- SCHURZ**, Carl (U. S. army officer & journalist); b. nr. Cologne, Ger. (1829-1906).
- SCOTT**, Robert Falcon (explorer); b. Devonport, Eng. (1868-1912).
- SCOTT**, Sir Walter (novelist); b. Edinburgh, Scot. (1771-1832).
- SEWARD**, William Henry (statesman); b. Florida, N. Y. (1801-1872).
- SHAKESPEARE**, William (dramatist); b. Stratford on Avon, Eng. (1564-1616).
- SHAW**, George Bernard (dramatist); b. Dublin, Ire. (1856-1950).
- SHELLEY**, Percy Bysshe (poet); b. nr. Horsham, Sus., Eng. (1792-1822).
- SHERATON**, Thomas (furniture designer); Stockton-on-Tees, Eng. (1751-1806).
- SHERIDAN**, Richard Brinsley (dramatist); b. Dublin, Ire. (1751-1816).
- SHERMAN**, William Tecumseh (army officer); b. Lancaster, Ohio (1820-1891).
- SHERWOOD**, Robert Emmet (dramatist); b. New Rochelle, N. Y. (1896-1955).
- SKINNER**, Otis (actor); b. Cambridge, Mass. (1848-1942).
- SLOAN**, John (painter); b. Lock Haven, Pa. (1871-1951).
- SMITH**, Adam (economist); b. Kirkcaldy, Fife., Scot. (1723-1790).
- SMITH**, Alfred Emanuel (politician); b. New York City (1873-1944).
- SMITH**, John (American colonist); b. Wiltoughby, Lincs., Eng. (1579-1631).
- SMITH**, Joseph (religious leader); b. Sharon, Vt. (1805-1844).
- SMUTS**, Jan Christian (statesman); b. Cape Town, So. Af. (1870-1950).
- SOCRATES** (philosopher); b. Athens (c.470-399 B.C.).
- SOLOMON** (King of Israel); b. Jerusalem (?) (died c.933 B.C.).
- SOLOM** (lawgiver); b. Salamis, Gr. (638?-2559 B.C.).
- SOPHOCLES** (dramatist); b. nr. Athens (496?-406 B.C.).
- SOTHERN**, Edward Hugh (actor); b. New Orleans, La. (1859-1933).
- SOUSA**, John Philip (composer); b. Washington, D. C. (1854-1932).
- SPENCER**, Herbert (philosopher); b. Derby, Eng. (1820-1903).
- SPENGLER**, Oswald (philosopher); b. Blankenburg, Ger. (1880-1936).
- SPENSER**, Edmund (poet); b. London, Eng. (1552?-1599).
- SPINOZA**, Baruch (philosopher); b. Amsterdam, Hol. (1632-1677).
- STALIN**, Joseph Vissarionovich (Iosif V. Dzhugashvili) (statesman); b. nr. Tiflis, Georgia, Rus. (1879-1953).
- STANISLAVSKI** (Konstantin Sergeevich Alekseev) (stage producer); b. Moscow, Rus. (1863-1938).
- STANLEY**, Sir Henry Morton (John Rowlands) (explorer); b. Denbigh, Wales (1841-1904).
- STEIN**, Gertrude (author); b. Allegheny, Pa. (1874-1946).
- STEINMETZ**, Charles Proteus (engineer); b. Breslau, Ger. (1865-1923).
- STENDHAL** (Marie Henri Beyle) (novelist); b. Grenoble, Fr. (1783-1842).
- STERNE**, Laurence (novelist); b. Clonmel, Ire. (1713-1768).
- STEVENSON**, Robert Louis Balfour (novels & poet); b. Edinburgh, Scot. (1850-1894).
- STONE**, Lucy (woman suffragist); b. nr. West Brookfield, Mass. (1818-1893).
- STOWE**, Harriet Elizabeth (nee Beecher) (novelist); b. Litchfield, Connecticut (1811-1896).
- STRADIVARI**, Antonio (violinmaker); b. Cremona, It. (1644-1737).
- STRAUS**, Oskar (composer); b. Vienna, Aus. (1870-1954).
- STRAUSS**, Johann (composer); b. Vienna, Aus. (1825-1899).
- STRAUSS**, Richard (composer); b. Munich, Ger. (1864-1949).
- STUART**, Gilbert Charles (painter); b. Rhode Island (1755-1828).
- STUYVESANT**, Peter (Governor of New Amsterdam); b. W. Friesland, Neth. (1592-1672).
- SULLIVAN**, Sir Arthur Seymour (composer); b. London, Eng. (1842-1900).
- SULLIVAN**, John Lawrence (boxer); b. Boston, Mass. (1858-1918).
- SUN YAT-SEN** (statesman); b. nr. Macao, China (1866-1925).
- SWIFT**, Jonathan (satirist); b. Dublin, Ire. (1667-1745).
- SWINBURNE**, Algernon Charles (poet); b. London, Eng. (1837-1909).
- SYNGE**, John Millington (dramatist); b. nr. Dublin, Ire. (1871-1909).
- TAFT**, Robert Alphonso (legislator); b. Cincinnati, Ohio (1889-1953).
- TALLEYRAND-PÉRIGORD**, Charles Maurice de (statesman); b. Paris, Fr. (1754-1838).
- TAMERLANE** (Timur) (Mongol conqueror); b. nr. Samarkand, Sib. (1336?-1405).
- TARKINGTON**, Newton Booth (novelist); b. Indianapolis, Ind. (1869-1946).
- TCHAIKOVSKY** (or TSCHAIKOWSKY), Peter (Pëtr) Illich (composer); b. Ural region, Rus. (1840-1893).
- TECUMSEH** (Shawnee Indian chief); b. nr. Springfield, Ill. (1768?-1813).
- TENNYSON**, Alfred (1st Baron Tennyson) (poet); b. Somersby, Lincs., Eng. (1809-1892).
- TERRY**, Ellen Alicia (actress); b. Coventry, Eng. (1847-1928).
- TETRAZZINI**, Luisa (soprano); b. Florence, It. (1874-1940).
- THACKERAY**, William Makepeace (novelist); b. Calcutta, India (1811-1863).
- THOMAS**, Dylan Marlais (poet); b. Swansea, Wales (1914-1953).

- THOREAU, Henry David** (naturalist & author); b. Concord, Mass. (1817-1862).
- THORPE, Jim** (James Francis Thorpe) (athlete); b. nr. Prague, Oklahoma (1888-1953).
- TILDEN, William Tatem, II** (tennis player); b. Philadelphia, Pa. (1893-1953).
- TINTORETTO, II** (Jacopo Robusti) (painter); b. Venice (1518-1594).
- TITIAN** (Tiziano Vecelli) (painter); b. Preve di Cadere, Venezia, It. (1477-1576).
- TOLSTOI, Count Leo** (Lev) Nikolaevich (novelist); b. Tula prov., Rus. (1828-1910).
- TOULOUSE-LAUTREC** (Henri Marie Raymond de Toulouse-Lautrec Monfa) (painter); b. Albi, Fr. (1864-1901).
- TROTSKY, Leon** (Lev Davidovich Bronstein) (statesman); b. Elisavetgrad, Rus. (1877-1940).
- TURGENEV, Ivan Sergeevich** (novelist); b. Orel, Rus. (1818-1883).
- TWAIN, Mark** (Samuel Langhorne Clemens) (author); b. Florida, Mo. (1835-1910).
- TWEED, William March** (politician); b. New York City (1823-1878).
- VALENTINO, Rudolph** (Rodolpho d'Antonguella) (actor); b. Castellana, It. (1895-1926).
- VANDENBERG, Arthur Hendrick** (legislator); b. Grand Rapids, Mich. (1884-1951).
- VANDERBILT, Cornelius** (financier); b. Port Richmond, N. Y. (1794-1877).
- VANDYKE** (or VAN DYCK), Sir Anthony (painter); b. Antwerp, Hol. (1599-1641).
- VAN GOGH, See** Gogh.
- VALÁZQUEZ, Diego Rodríguez de Silva y** (painter); b. Seville, Sp. (1599-1660).
- VERDI, Giuseppe** (composer); b. Roncole, Parma, It. (1813-1901).
- VERMEER, Jan** (or Jan van der Meer van Delft) (painter); b. Delft, Hol. (1632-1675).
- VERNE, Jules** (author); b. Nantes, Fr. (1828-1905).
- VILLA, Pancho** (or Francisco) (Doroteo Arango) (bandit); b. Río Grande, Mex. (1877-1923).
- VILLON, François** (François de Montcorbier) (poet); b. Paris, Fr. (1431-c.1463).
- VINCI, Leonardo da** (painter & scientist); b. Vinci, Tuscany, It. (1452-1519).
- VIRGIL** (or VERGIL) (Publius Vergilius Maro) (poet); b. Mantua, Gaul (70-19 B.C.).
- VOLTAIRE** (François Marie Arouet) (author); b. Paris, Fr. (1694-1778).
- WAGNER, Honus** (John Peter Wagner) (baseball player); b. Mansfield, Pennsylvania (1874-1955).
- WAGNER, Wilhelm Richard** (composer); b. Leipzig, Ger. (1813-1883).
- WALTON, Izaak** (author); b. Stafford, Eng. (1593-1683).
- WARD, Fannie** (actress); b. St. Louis, Mo. (1872-1952).
- WASHINGTON, Booker Tallaferro** (educator); b. Franklin Co., Va. (1856-1915).
- WATSON, Thomas John** (industrialist); b. Campbell, N. Y. (1874-1956).
- WATT, James** (inventor); b. Greenock, Scot. (1736-1819).
- WAYNE, Anthony** (military officer); b. Waynesboro, Pa. (1745-1796).
- WEBER, Karl Maria Friedrich Ernst von** (composer); b. nr. Lübeck, Ger. (1786-1826).
- WEBSTER, Daniel** (statesman); b. Salisbury, N. H. (1782-1852).
- WEBSTER, Noah** (lexicographer); b. West Hartford, Conn. (1758-1843).
- WEILL, Kurt** (composer); b. Dessau, Ger. (1900-1950).
- WEIZMANN, Chaim** (Israeli statesman); b. Grodno prov., Rus. (1874-1952).
- WELLINGTON, Duke of** (Arthur Wellesley) (statesman); b. Ireland (1769-1852).
- WELLS, Herbert George** (author); b. Bromley, Kent, Eng. (1866-1946).
- WESLEY, John** (religious leader); b. Epworth Rectory, Lincolnshire, Eng. (1703-1791).
- WESTINGHOUSE, George** (inventor); b. Central Bridge, N. Y. (1846-1914).
- WHARTON, Edith Newbold** (nee Jones) (novelist); b. New York City (1862-1937).
- WHISTLER, James Abbott McNeill** (painter); b. Lowell, Mass. (1834-1903).
- WHITE, William Allen** (journalist); b. Emporia, Kans. (1868-1944).
- WHITMAN, Walt** (Walter) (poet); b. West Hills, N. Y. (1819-1892).
- WHITNEY, Eli** (inventor); b. Westboro, Mass. (1765-1825).
- WHITTIER, John Greenleaf** (poet); b. Haverhill, Mass. (1807-1892).
- WILDE, Oscar Fingal O'Flahertie Wills** (author); b. Dublin, Ire. (1856-1900).
- WILLIAMS, Roger** (clergyman); b. London, Eng. (1603?-1683).
- WILLKIE, Wendell Lewis** (lawyer); b. Elwood, Ind. (1892-1944).
- WISE, Stephen Samuel** (rabbi); b. Budapest, Hung. (1874-1949).
- WOLFE, Thomas Clayton** (novelist); b. Asheville, N. C. (1900-1938).
- WOLSEY, Thomas** (prelate & statesman); b. Ipswich, Eng. (1475?-1530).
- WOOD, Grant** (painter); b. Anamosa, Iowa (1892-1942).
- WOOLF, Adeline Virginia** (nee Stephens) (novelist); b. London, Eng. (1882-1941).
- WOOLLCOTT, Alexander** (author); b. Phalanx, N. J. (1887-1943).
- WORDSWORTH, William** (poet); b. Cockermouth, Cumb., Eng. (1770-1850).
- WRIGHT, Orville** (inventor); b. Dayton, Ohio (1871-1948).
- WRIGHT, Wilbur** (inventor); b. Millville, Ind. (1867-1912).
- YEATS, William Butler** (poet); b. nr. Dublin, Ire. (1865-1939).
- YOUNG, Brigham** (religious leader); b. Whitingham, Vt. (1801-1877).
- YOUNG, Cy** (Denton True Young) (baseball player); b. Gilmore, Ohio (1867-1955).
- ZIEGFELD, Florenz** (theatrical producer); b. Chicago, Ill. (1867-1932).
- ZOLA, Emile** (novelist); b. Paris, Fr. (1840-1902).
- ZOROASTER** (or ZARATHUSTRA) (religious leader); b. Persia (lived about the 6th century B.C.).



# CONTRACT BRIDGE

By B. JAY BECKER

Top Record-Holder in Masters' Individual Championship Play

Contract bridge was invented by Harold S. Vanderbilt in 1925. The new game was a great improvement over the parent game, auction bridge, which in turn had been derived from whist, a card game of two centuries standing.

Contract bridge developed rapidly but did not catch fire with the public until the late Ely Culbertson, a promotion genius of the first order, staged a simulated grudge match against Sidney Lenz in 1931. Newspapers everywhere carried daily stories on the hectic match refereed by Lieutenant (now General) Alfred M. Gruenther.

Various systems of bidding sprang up during the first years of contract bridge but after five or six years of experimentation the best features of each were joined to form what is essentially the system in use today. Among the leading contributors to the evolution of present day methods were Vanderbilt, Culbertson, Lenz, Work, Whitehead, Reith, Goren, Blackwood, Roth, Stayman.

Today, bridge is regarded as almost a social necessity. Hundreds of textbooks have been written and many newspapers carry daily bridge columns. It is estimated there are 25 million bridge players in the United States. Sectional, national and international tournaments are conducted by the American Contract Bridge League, governing body of bridge.

## EVALUATION

For many years, the chief method of determining the value of a hand was by means of a scale called honor tricks. Culbertson was chief proponent of this method. High cards are, for example, valued as follows:

A = 1 H. T.	K-x = $\frac{1}{2}$ H. T.
K-Q = 1 H. T.	Q-J-x = $\frac{1}{2}$ H. T.
A-K = 2 H. T.	Q or J = plus value
A-Q = $\frac{1}{2}$ H. T.	

During the past ten years the honor trick method has been largely supplanted by the point count method. Point count was devised by Milton Work back in the auction days, but was not generally accepted until Charles H. Goren took a prominent part in bringing it to the attention of the public. The experts had played point count for years, but to the lesser players it was relatively unknown. The introduction of point count has done a great deal to raise the level of bidding skill for the average player.

Point count evaluation divides into two categories: high card points and distributional points. With balanced hands—hands without a void or singleton—the high card point count is both practical and accurate and reflects essentially the true value of a hand.

## HIGH CARD POINTS

Ace = 4 points	Queen = 2 points
King = 3 points	Jack = 1 point
Total points in deck = 40	
Points in each suit = 10	
Points in average hand = 10	
Points required for game = 26	
Points required for small slam = 33	
Points required for grand slam = 37	

Opening notrump bids are characterized by distribution which is usually 4-3-3-3, 4-4-3-2, or in some cases 5-3-3-2 and strength or stoppers in all four suits. The required point count is:

Opening 1 N. T. = 16 to 18 points
Opening 2 N. T. = 22 to 24 points
Opening 3 N. T. = 25 to 27 points

With 19, 20 or 21 points, bid one of a suit and jump in notrump over partner's response. Responses to an opening one notrump bid with a balanced hand:

Raise 1 N. T. to 2 N. T. with 8 or 9 points
Raise 1 N. T. to 3 N. T. with 10 to 14 points
Raise 1 N. T. to 6 N. T. with 17 to 20 points
Raise 1 N. T. to 7 N. T. with 21 points or more

## DISTRIBUTIONAL POINT COUNT

Two methods of evaluating distributional points are in general use. According to the Goren method 3 points are taken for each void, 2 points for each singleton and 1 point for each doubleton. These are added to the high card point count to determine the value of the hand.

According to the Karpin method 1 point is taken for each card in a suit above four. These points are then added to the high card points to determine the value of the hand.

As new information is obtained during the bidding, the original distributional point count evaluation may rise or fall. Distributional point count should not be rigidly followed. It is a flexible yardstick.

## OPENING SUIT BIDS

The opening bid of one in a suit ranges usually from 12 to 21 points. All hands containing 14 high card points are compulsory opening bids. Distributional factors are important in evaluating a hand. Distribution is a key factor in every deal.

In choosing the suit with which to open the bidding, the longest suit is usually bid first. When two suits are of equal length the higher ranking suit is generally bid first. When there are three biddable four-card suits the suit that is chosen is the one directly beneath the singleton in rank.

## RESPONSES TO SUIT BIDS

Any new suit named by the responding hand compels the opening bidder to bid

again. With 6 points or more the partner of the opening bidder of one in a suit must make a response. He may name a new suit, respond in notrump or raise the opening bidder's suit.

The single raise of the opening bidder's suit denotes adequate trump support and 6 to 9 points which include distributional values. The response of one notrump denotes a balanced hand without adequate trump support with 6 to 9 points in high cards. The response of one of a new suit denotes 6 to 16 points. The response of two in a new suit denotes 10 to 16 points.

The jump raise of the opening bidder's suit, for example 1 spade—3 spades, denotes at least four trumps and 13 to 15 points. The response of 2 notrump to the opening bid of one in a suit denies adequate trump support and represents a balanced hand with 13 to 15 points in high cards, plus stoppers in the remaining three suits. The response of 3 notrump indicates 16 to 18 points and a balanced hand with stoppers in the other three suits.

### BIDDABLE SUITS

Any five card suit is biddable. Any four card suit which includes four high card points is biddable.

### REBIDS BY OPENING BIDDER

Having opened with one of a suit the opening bidder may identify a minimum type of hand by rebidding one notrump or by repeating his previous suit in minimum terms. A rebid by the opening bidder, where he goes one level higher than necessary, represents a strong hand containing at least 17 points.

### OPENING BID OF TWO IN A SUIT

This bid is forcing to game. It represents a hand which for practical purposes can make a game by itself. The best method in use to determine whether a hand ranks as a two bid is to count the losers, and if the hand then contains enough winners to insure a game the hand qualifies as a two bid. The response to a two bid is 2 notrump unless the responder has more than 6 points in which case he either raises his partner, bids his own suit or jumps in notrump.

### OVERCALLS

The bid over an adverse opening bid, when made in the one level, usually ranges in high cards between 7 and 13 points and includes a good suit. The overcall in the two level is made with a strong suit and usually has about 12 or 13 points in high cards. In making overcalls, the number of winning tricks which are probable is more important than the point count. The overcaller should not be subject to a penalty in excess of 500 points in the event he should be doubled. The informatory double over an adverse opening bid represents at least an opening bid of its own.

### BLACKWOOD SLAM CONVENTION

After the partners have agreed definitely or inferentially upon a suit as trump the bid of 4 notrump by either of them is an artificial bid requesting partner to name the number of Aces he has. The responses are as follows:

- No Aces — 5 Clubs
- 1 Ace — 5 Diamonds
- 2 Aces — 5 Hearts
- 3 Aces — 5 Spades
- 4 Aces — 5 Notrump

When the response is followed by a 5 notrump bid it should be construed as a request for the number of Kings. The responses are as follows:

- No Kings — 6 Clubs
- 1 King — 6 Diamonds
- 2 Kings — 6 Hearts
- 3 Kings — 6 Spades
- 4 Kings — 6 Notrump

### STAYMAN NOTRUMP CONVENTION

The response of 2 Clubs to partner's opening one notrump bid is an artificial bid requesting the opener to bid a four card major suit. If the opening bidder has no four card major he replies by bidding 2 diamonds with a minimum one notrump bid, or 2 notrump with a maximum notrump bid.

### IN GENERAL

Bridge is a partnership game. In bidding, each player tries to represent to his partner the strength or weakness of his hand. Exact bidding will produce exact results. Weak hands are bid weakly; strong hands are bid strongly. Forcing bids must be respected. Partners' bids should be trusted more than the opponents' bids.

High card point count in balanced hands is very accurate. Distributional point count is sometimes treacherous and common sense should be employed where the distributional point count does not appear to give an accurate evaluation of the true value of the hand.

In counting defensive tricks against a suit contract, honor tricks provide a more reliable gauge than point count.

Remember that the important thing in bridge is the number of tricks that are taken, not the number of points a side has. Remember also that all the rules in bridge are made to be broken at the appropriate time. There is no such word as "never" when it comes to stating a general principle. You can be dealt 635,013,559,600 different hands in bridge. No general rules can be expected to cover all possibilities. Imagination and ingenuity are important qualities to be exercised.

Large penalties should be avoided. A game should not be bid unless there is nearly an even chance of making it; a small slam should not be bid unless there is an even chance at least to make it; a grand slam should not be bid unless there is at least a 2 to 1 probability of making it. Play probabilities, and not hunches. Bridge is a scientific game.

## PARLIAMENTARY PROCEDURE

by

Dan Golenpaul

Parliamentary procedures are rules for the conduct of a meeting in an orderly and democratic manner. Their purpose is to ensure the rule by a majority and to protect the rights of all members of an organization or assembly in meetings and in connection with all activities of the organization. The application of parliamentary rules is solely for this purpose.

Very often, though, individuals employ the rules for a contest of wits. This practice can be interesting and the life of the meeting, but it can also be a nuisance and a field day for parliamentary pests. The degree to which this activity may be tolerated should be dictated by circumstances. A certain amount of indulgence may be necessary because it is part of the game and is inevitably an expression of many egos that meet in a group.

Under no circumstances, however, should a chairman or members permit anyone to use the rules of procedure to trick and confuse members or to impede the function of a meeting. To prevent these occurrences, a knowledge of parliamentary rules is important. We will do our best in the limited space permitted to impart a little learning. (But remember, a little learning is a dangerous thing.) What we are setting forth here should be adequate to take care of most situations in organizations made up of friendly people who want to conduct their business in an orderly, friendly manner.

If it is necessary for you to be a member of a group that is involved in bitter conflicts, then we advise that you go to more technical and authoritative works on parliamentary procedure such as *Robert's Rules of Order*, *Cushing's Manual*, *Sturgis' Standard Code of Parliamentary Procedure* and others. We also suggest that you go to the meetings with a good lawyer and a baseball bat.

### HOW TO FORM AN ORGANIZATION

People form or join organizations because they have a common interest or purpose that can best be advanced and attained through group activity. Whether the character of the organization be social, political, educational, communal, fraternal or athletic, its purpose and government are usually expressed in by-laws. They are not required to be elaborate, technical or legal.

### BY-LAWS

By-laws should simply state the objects of the organization, the rights and duties of members, the qualifications of members, the number required to constitute a quorum, the dues, the necessary governing officers and how they should be elected, their terms of office, when meetings should be held and where, the order of business and, in the case of large and impersonal organizations, an authority for settling parliamentary disputes. (An organization usually adopts as its guide such works as mentioned heretofore.)

### FIRST MEETING

At the first meeting of a group, temporary officers are chosen: a chairman, a secretary and a committee to prepare a draft of by-laws. The meeting is called to order by the member of the group who has assumed the leadership in the formation of the organization. He or she opens the meeting by the simple statement: "I now call the meeting to order," and asks the members to make nominations for chairman. When this announcement is made, members may ask for the floor by raising their hands, and, when recognized, offer a name in nomination. The person presiding can be nominated as can any other member present. Nominations require no seconding. A majority vote is necessary for the election of the chairman. The same procedure is required for the secretary and committee on by-laws.

The officers selected at the first meeting may serve until the next meeting or for a limited period, to be decided by a majority vote of the members present.



## SECOND MEETING

At the second meeting, the report of the committee on by-laws is presented to the membership. The entire report may be accepted by a motion to adopt the report. A two-thirds vote is required. If the entire report is not acceptable to the membership, each provision may be considered separately; consideration consists of debating, amending, accepting or rejecting. The vote required on each provision is two-thirds of the membership present instead of the usual majority. Because by-laws are the fundamental basis of the organization, they should be acceptable to as many members as possible.

By-laws can be amended at any time during the life of the organization. Any proposals for changes in the by-laws require prior notice in writing to the entire membership before acting upon the proposed amendments at any meeting.

## ELECTION OF OFFICERS

With the adoption of the by-laws providing for the type of officers for the organization, and the length of their terms, the organization proceeds to elect such officers. The usual officers for most groups are a president, vice-president, recording secretary, corresponding secretary, treasurer, sergeant at arms, and committees. Some have an executive secretary, a paid job, but an organization would have to be large to warrant a paid official.

All members are eligible for office when an organization is first formed. But later the by-laws may require a certain minimum period of membership as a qualification to hold office. Nominations are made by the simple statement: "I nominate so-and-so." The nominations do not require a second and a majority vote is necessary for election.

## DUTIES OF OFFICERS

**President:** The president, as in government, is top man in an organization. Some organizations call this official "chairman." President sounds better, and is more appropriate when he performs not only the functions of presiding at meetings, but other duties in directing the organization. Chairman is the proper designation for one elected only to preside at a meeting.

Their duties as presiding officers are identical, regardless of title; they call the meeting to order, then present the order of business which the meeting is to act upon. They recognize members who desire the floor for a proposal or a discussion. They are supposed to see that everyone who wishes to speak has the opportunity, and to do as little talking themselves as possible. The presiding officer has the right to take part in a discussion. When he does, the vice-chairman should take the chair until the presiding officer has concluded his talk.

A chairman is really a moderator who directs, controls and regulates proceedings. He is neither a boss nor an antagonist and is not to be regarded as such by the members. It is the chairman's primary job to keep the meetings moving smoothly. He should prevent members from abusing their privileges without interference, but should not curb their rights. The chair must entertain all motions that are seconded and must restate them for the members. He must call for a vote on motions and declare the motion adopted or defeated on the basis of the vote. He should allow for a re-count or a roll call whenever requested to do so. When referring to himself, the presiding officer usually says: "The chair recognizes Mr. Blank" instead of "I recognize Mr. Blank."

The president or permanent chairman is usually an ex-officio member of all committees. Although he is not obligated to attend all meetings, he may if he so desires.

**Secretary:** The duties of a secretary are to keep the records of the organization, to record the minutes of the meetings, to handle the correspondence (unless the organization is large enough to require a corresponding secretary), such as notifying members of regular meetings or of a special meeting, reading the minutes at the meeting, etc.

The minutes of a secretary should indicate when the meeting was held, where it took place, who presided, what business was transacted, when the meeting adjourned, etc.

**Treasurer:** The treasurer's duties are to handle the funds of the organization, to collect the dues, to pay the bills when

authorized, to keep the books for the organization with records of income and expenditures, and to render reports on finances at the regular meetings.

**Sergeant-at-Arms:** The duties of the sergeant-at-arms are to assist the chairman in preserving order among the people present at a meeting, members and visitors, to act as a sort of usher by checking people at the door to see that only those entitled to be present at the meeting are admitted, and to escort anyone out if requested to do so by the chairman.

### COMMITTEES

The purpose of committees is to expedite the transaction of business on matters that require more time than the meeting permits, or on matters that require time for investigation and special study. Committees are essential in a large organization, but are really not necessary for a small group that can handle its limited business at the regular membership meetings.

The types of committee may vary according to the needs of an organization. A "standing" committee has a fixed term of office and gives continuous service. A "special" committee serves temporarily to investigate and report on some special project or condition.

The top committee in most organizations is the executive committee, sometimes made up of the chairmen of the various committees, sometimes selected from the general membership. Other committees are: membership committees, athletic committees, education committees, social or house committees, committees on finance, temporary committees to deal with a temporary specific problem, etc.

Committees may be appointed by the presiding officer, or be elected by the group, depending upon the by-laws. We think it best for committees to be elected by the membership. The chairman of the committee is either designated by the presiding officer, elected by the committee, or is the person obtaining the most votes in the election. Committees should consist of an odd number of members to assure a majority vote and a minimum of stalemates. As far as possible, the by-laws governing

the conduct of a meeting or organization govern the committees as well.

Most committees are usually made up of small groups and, therefore, their meetings are less formal than regular organization meetings. Motions do not require seconding, speeches are not as restricted and limited, and the chairman attending the committee, or the president of the organization, if attending the committee meeting, participates in the discussions on a par with the other members.

Providing for numerous officers is a good thing because it distributes responsibility among more members. This is important to keep in mind in connection with committees; while good people should be placed on many committees, it is best and advisable to have as many members on committees as possible.

The committee chairman reports for the committee to the general membership meeting. Reports of the committee may consist only of information requiring no action or may contain recommendations for certain action which is often the equivalent of a proposed motion.

When there is a difference of opinion among committee members, the majority report offered is considered the committee report. The dissenting members have the right, however, to submit a minority report proposing a different course of action. Both reports must be heard or read at the same meeting. No action on the majority report is in order until the minority report is disposed of. It can be disposed of in either of two ways. (a) Any member may object to consideration of the minority report and such objection must be voted on immediately without debate. If carried, the minority report is dropped. (b) If the objection to consideration is not upheld, then a motion to substitute the minority report for the majority report is in order. If this motion is carried, the majority report is eliminated and the minority report becomes the committee report and is the only report before the body. If the motion to substitute is not carried, then the meeting proceeds to deal with the majority report.

It is well to bear in mind that any report or motion belongs to the membership.

If they are not satisfied with either report, they can dissolve the committee and act directly from the floor or appoint a new committee.

The chairman of the committee calls the meetings of the committee. If he fails or refuses to do so, or if he is absent, any two members of the committee may call a meeting. The chairman of a committee usually acts as its secretary.

If a committee fails to render a report on a matter referred to it within a reasonable time, the membership may force it to do so by drawing up a petition bearing the number of signatures required in the by-laws. This is called discharging a committee.

### ORDER OF BUSINESS

The chairman calls the meeting to order. He must determine whether a quorum is present. The number of members required to constitute a quorum is stipulated in the by-laws, usually one more than half of the membership, or as low as one-tenth of the membership. Without a quorum, business cannot be legally conducted. The secretary reads the minutes of the previous meeting and they are adopted, perhaps with corrections, or, as read. Officers and committees make any reports they have. Old business left over from the previous meeting is transacted. New business is brought up, discussed and acted upon. At the close, the chairman says that he will entertain a motion for adjournment.

### RULES OF DEBATE

The presiding officers should first recognize the mover of a proposal, or the member of a committee presenting a report, and should try to alternate recognition between those favoring and those opposing a proposition. Any member is entitled to speak on the main question and on each amendment as presented. He must confine himself to the question under consideration, must avoid personalities, and must not accuse others of ill motives. In some groups the by-laws limit each speaker to a fixed number of minutes. The meeting may vote to extend the time of a speaker if it so desires. Debate can only be halted by a motion for the previous question and a two-thirds vote is required.

### VOTING RULES

There are several methods of taking a vote. The simplest is by voice—"ayes" and "noes." This may be challenged by any member who thinks that the chairman did not hear correctly, in which case the vote is taken by a show of hands, or by standing. Roll call votes, recorded by the secretary, are required in some instances. The closed ballot (written votes) also is commonly used, especially in the election of officers. Only attending members may vote, unless the by-laws specifically permit proxy voting. A tie vote defeats a motion. The chairman is allowed to break a tie, though, if he has not previously voted. Some organizations permit a chairman to vote only in case of a tie, while others allow him to vote as a regular member.

A majority vote is generally required to pass ordinary motions or to adopt ordinary actions. There are certain motions which require a two-thirds vote of those present. These generally include the following: amendments to the by-laws, to take up a question out of its proper order, to suspend the rules, to support an objection to the consideration of a question, to take up the previous question, to limit debate, to expel a member or officer, to discharge a committee, or to refer back to a committee. No vote can be made unanimous if even one member present objects.

### WHAT HAPPENS TO A MOTION

A motion is a proposal for action by an organization. It is made by any member who asks the chair for the floor and is properly recognized. Most motions require a second before being placed before the group. Not more than one main motion may be considered at a time. The procedure is simple. One merely says, "I move the following." The chairman then asks if anyone seconds the motion. If it is properly seconded, the chairman announces that a motion has been made and seconded, calls for a discussion and repeats the motion on request. A motion may be voted on without discussion, but discussion is required if requested by any member.

A motion causes many things to happen. It provokes debate, suggests modifications,



clarifies the thinking and expresses the will of the group on a question. Once a motion is presented to the membership, it belongs to them to treat and dispose of in any one of several ways and can only be withdrawn with the consent of the membership.

A motion may be amended. This means that the motion may be modified or qualified by adding, substituting, or eliminating words or whole paragraphs. These changes must be relevant to the main motion.

For example, a motion is made for the organization to publish a magazine and stipulates (a) the publication to be a monthly, (b) to have two editors, (c) to cost the members \$1.00 a year, etc. This motion may be amended as follows: (a) to substitute "weekly" for "monthly," (b) to provide salaries for the two editors, (c) to eliminate the dollar charge for the magazine. All these amendments are in order because while the original motion has been amplified or qualified by the amendments, the proposal for publishing a magazine still prevails.

Amendments that are irrelevant are not permissible, such as an amendment requiring the editors to watch television. This is improper (perhaps for other reasons) because it is extraneous to the main question of proposing the publication of a magazine.

Amendments that negate the purpose of the motion, such as a proposal that the organization should not publish a magazine, are out of order because if the membership is entirely opposed to the idea, it can vote against the main motion or dismiss it in other parliamentary ways.

Other important rules governing amendments are:

1. There is no limit to the number of amendments that may be offered, but each amendment must be disposed of before a new one may be proposed.

2. After all amendments have been acted on, the meeting votes on the main motion, and all of the adopted amendments are incorporated in the main motion.

3. All amendments require a majority vote for passage.

4. A rejected amendment may not be resubmitted in identical form and no amend-

ment may be offered reversing an amendment previously adopted.

This is not all that can happen to a motion. In addition to amendments to the motion, you are also permitted to make amendments to the amendments. For example, the original motion stipulates that the magazine should have two editors. An amendment provides that the editors be paid salaries. This amendment can be amended to provide what the salary should be.

Now, if you are thinking of whether you can amend the amendment to the amendment, the answer is "No." Although this has really gone far enough, there is something else you are allowed to do, for better or worse, and that is to introduce a substitute for the motion itself or for any of the amendments or for everything that has been proposed on the question. The substitute for an amendment does not modify the amendment, but replaces it and is subject to the same rules that apply to amendments.

When amendments pile up to the point of confusing the membership, resorting to a substitute for the entire proposition may be helpful. The best way to do this, under the circumstances, is for someone to move to have a special committee designated to prepare a substitute motion for the whole.

If the motion is adopted, the committee-elect should withdraw from the meeting to try to reconcile any contradictions contained in the motion or the amendments. It should bring forth a clear substitute that expresses the intentions of most of the proposals.

Let us not lose sight of the fact that the purpose of a motion is not to create an endless chain of acts, but to get something done. In this connection, it is well to bear in mind that the motion and amendments do not necessarily conflict and that the proposer of a motion may accept the amendments without discussion or vote.

Motions that cannot be amended: These include such motions as questions of order or appeal, objections to consideration of the question, or motions to adjourn, to call for the order of the day, to vote, to withdraw a motion, to take up a question out

of proper order, to suspend the rules, to table, to take from the table, to reconsider, to consider the previous question, to postpone indefinitely, to amend an amendment, or to nominate. Motions to postpone indefinitely, to limit debate, or to recess can be amended as to time only.

#### DELAYING OR CANCELING CONSIDERATION OF A MOTION

It is not binding on a meeting to deal with a motion at the time it is proposed. On the contrary, the membership has the choice of postponing or renewing consideration of a motion. Here are some of the ways to attain such objectives.

**Objection to consideration:** Consideration of any issue may be stopped before discussion begins on the question, even though it involves interrupting the speaker, by objecting to its consideration. This objection may be made by any member and does not require a second. Objection to consideration calls for an immediate vote without debate or amendment and requires a two-thirds vote. If carried, the motion is dropped for all time. The purpose of the act is to prevent the meeting from dealing with a question that may be offensive. This reason should be primary. Other reasons may be because it might waste the time of the meeting or it may be inappropriate to deal with the question at the time. This action is very drastic and should not be employed to gag any member except the village idiot at his worst.

**Motion to postpone indefinitely:** This is a polite way of killing a motion, at least for the moment. It differs from "Objection to consideration" insofar as the motion to postpone indefinitely and the motion itself are debatable and cannot be made while a member has the floor. This motion requires a second and calls for a majority vote. It cannot be amended and cannot be brought up again.

**Motion to "lay on the table":** If the meeting does not want to consider the motion at all, the procedure is to make a motion to "lay the question on the table." This suspends consideration of the main motion and amendments until such time

as the group chooses to take it up again, which can be later at the same meeting after other business has been transacted or at any subsequent meeting. This motion must be seconded, requires a majority vote, may not be debated or amended or postponed. The only way to bring the motion back is to move to "take it off the table."

**Motion to postpone to a definite date:** This is an expression of the will of the meeting to put off consideration of the proposal until later in the same session or until a subsequent meeting. The object of such an act is to delay consideration of the question until more members are present, or to enable members to acquire further information before making their decisions. This motion is debatable only as to the advisability of postponement. The subject matter of the motion is not debatable. It is open for amendment as to time only and requires a majority vote.

**Motion to refer to a committee:** This is usually done if a meeting feels that a question requires more time and information before it acts upon it. A motion to refer to a committee names an existing committee or creates a special committee for its consideration and may be accompanied by instructions. Seconding and a majority vote are required for passage of this motion. It can be debated only as to the desirability and advisability of referring it to the committee. It can be amended only as to the nature of the committee and as to the instructions.

#### HOW TO REOPEN A QUESTION

To avoid finality of decisions that may be harmful to the best interests of the members, certain actions previously taken by the members are subject to review by them. Such review may apply to matters acted upon, matters postponed, or matters delegated to committees.

**Motion to reconsider:** This deals with something acted upon by a meeting which the members would like to reconsider at another time during the same meeting. It is a motion that should be made by one who has voted with the majority, whether in the affirmative or the negative, and is

made because the voter has changed his mind on the matter in the light of new information. Very often a member deliberately votes for or against motions so that he can move for reconsideration of the subject later in the meeting when there may be a better chance for passing or defeating the motion because more members are present or because he will have an opportunity to persuade other members to change their votes. This is both good parliamentary procedure and democratic.

A motion to reconsider requires a second, a majority vote, is debatable and cannot be renewed. If a motion to reconsider is carried, the question is before the assembly with its original parliamentary status. Motions that cannot be reconsidered include: motions to take from the table, to lay on the table, or a motion for indefinite postponement that has been defeated.

To take from the table: This motion allows a group to take up a subject that was set aside by a motion to table it at a previous meeting. This resumption of consideration on a question rates priority over any new motions and can be introduced when there is no other business before the body. Motion to take a question from the table requires a second and a majority vote, is not debatable and cannot be amended.

A motion to rescind: This motion enables the membership to re-evaluate some action taken in the past because it may have been adopted without full understanding of the consequences at that time. The point of rescinding a previous act of an organization does not apply to any legally binding act committing the organization, nor to the election of members or officers. This motion calls for a second and majority vote unless the original motion involved required a two-thirds vote. It is debatable and cannot be amended.

Several important techniques for keeping informed about proceedings, preventing violations and protecting the rights of members, correcting errors, and expediting the business at hand, are:

Moving the Previous Question: This asks that the discussion be stopped at once on any motion before the body. A move for the previous question cannot interrupt the speaker. It requires a second, is not de-

batable, cannot be amended, and requires a two-thirds vote. Its purpose is to say, "Let's stop talking and vote."

Point of Information: This is a method of obtaining information about what is occurring through the medium of the chairman or the speaker. This interruption request is permissible even when one is speaking. It is unusual for the speaker on the chair to ignore such a request. Since it is intended only to secure information, it is not proper to use this as a device to make a statement or delay proceedings.

Point of Order: This questions the correctness of any action at the time it occurs. The only time that a point of order can be employed *after* an action has taken place, is if it involves a violation of by-laws, constitution, or the law. It is raised on the basis of a mistake or omission in procedure, of a violation of the rules of the organization, of decorum in debate, or of irrelevancy of debate and procedure. A point of order needs no seconding, cannot be amended and requires no vote.

A point of order may be raised by any member at any time. It is in the nature of a demand addressed to the chair, which is required to act immediately on the point of order raised. The procedure is as follows: A member announces, "I rise to a point of order." This automatically halts any discussion or action until the chairman rules on the point of order. If the chairman concurs, he announces that the point of order was well taken, and proceeds to correct whatever is in question.

Appeal: If any other member takes exception to this ruling, he may appeal from the decision of the chair. Another basis for an appeal may result when the chair declares the point of order not well taken. This appeal is usually made by the person raising the point of order. All appeals require a second, are debatable and are subject to a majority vote of the membership. If they vote for the appeal, the chairman's decision is reversed. If they vote against the appeal, the chairman's decision is upheld. In the event of a tie vote, the chairman is sustained. If the chairman is a member of the organization, he has the right to vote and may make the tie.



Discussions on some appeals are not customary, such as questions of indecorum, violation of rules of speaking, or order of business.

Sometimes the chairman is in doubt on a point of order. When he is, he may defer to someone present for advice, or ask the members to discuss and vote on the point of order. This is the only time that a point of order is debatable. Their vote determines the chairman's decision.

**Motion to adjourn:** This motion is in order at any time, but should be employed with discretion. Obviously, it should not interfere with the organization's efforts to get business done. This motion requires a second, is not debatable, cannot be amended, and must be voted on immediately. A majority vote is necessary. Any motion for adjournment that refers to a specific time or place for the next meeting is subject to debate and amendment.

We have tried to project the reader into actual participation in the forming of an organization and the conduct of a meeting, and we have given more attention to the processes than to the discussion of technical rules. In following this course, we may have omitted some matters that do not occur at every meeting, but that do happen occasionally and should be understood.

**Removal of officers:** This is sometimes an unhappy necessity. Misconduct of an officer may involve neglect of duties, abuse of privileges or incompetence. The removal of an officer is accomplished by preferring charges which should be of a serious nature and supported by proof. The charges may be considered at a general meeting or referred to a committee to investigate and to recommend a course of action. A two-thirds vote of the members present is required to remove an officer. A motion to remove an officer is debatable.

**Expulsion of members:** If a member violates his obligations and duties or is involved in an act that may bring disrepute to the organization, he is subject to charges and a hearing before a committee or the membership and can be expelled by a two-thirds vote. This action is debatable. Obviously, such actions should not be undertaken unless the charges are serious and

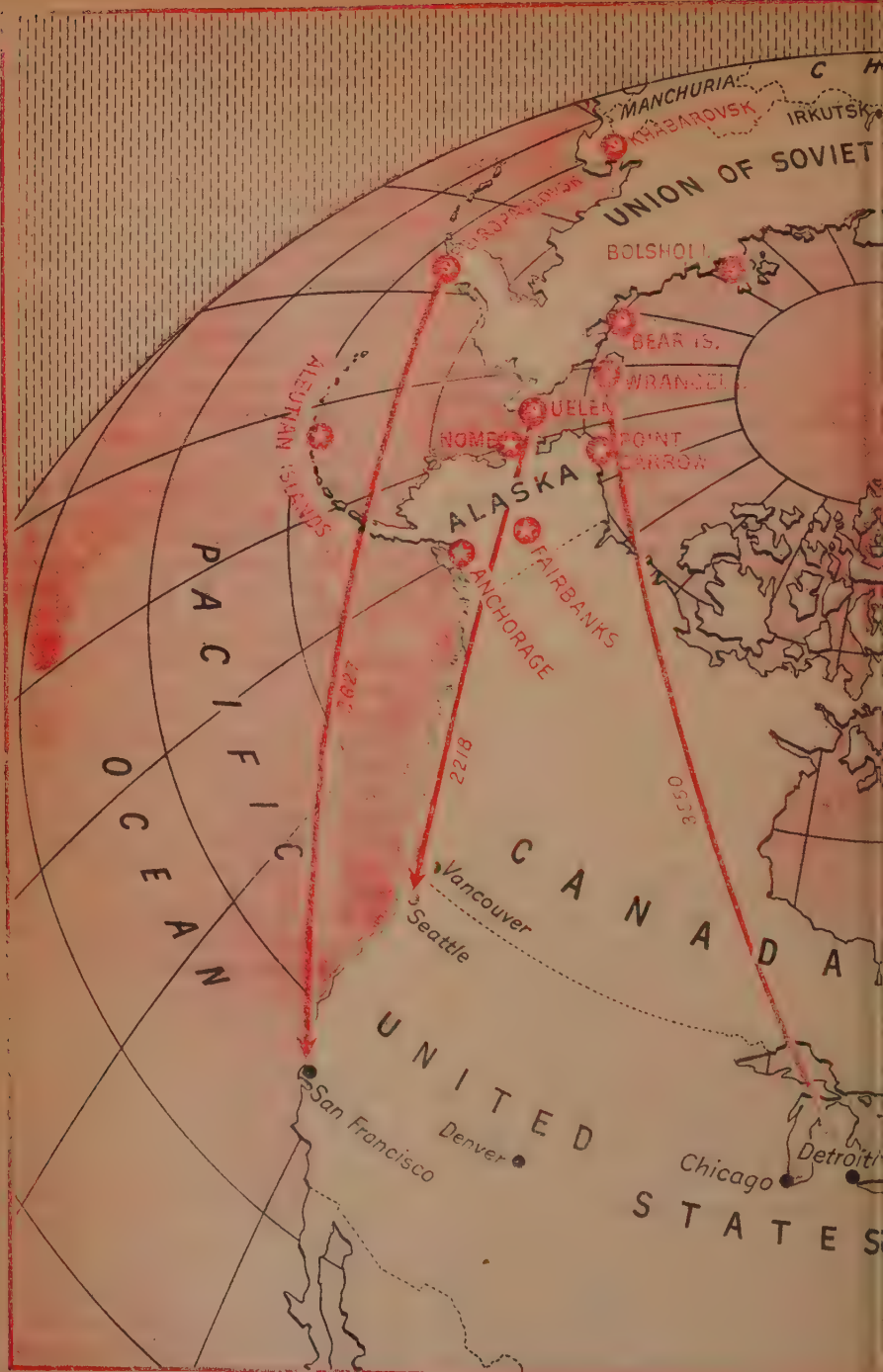
supported by substantial proof. It would be deplorable if the exercise of such a drastic action were based on a frivolous issue or personal bias. Sometimes the behavior of a member at a meeting requires disciplinary action in the form of a motion for immediate expulsion. This is not debatable and requires a two-thirds vote.

**Question of privilege:** A member may interrupt a meeting at any time to raise a question involving the comfort or convenience of the membership. It may concern such matters as the physical condition of the meeting hall, the seating of the members, the conduct of persons present, or the ability to hear speakers. This request requires no second, is not debatable, cannot be amended and is decided by the chair.

**Suspension of the rules:** The object of a proposal to suspend the rules is to permit a meeting to do something that is ordinarily prohibited by the rules of parliamentary procedure or by the adopted order of business. The suspension of rules is generally employed to deal with an emergency or special condition, such as permitting a guest speaker to start earlier than scheduled or allowing for the interruption of the regular order of business by a visiting committee. There are other circumstances under which the suspension of rules is permitted, but these cases are too complicated to be treated here. This motion cannot interrupt a speaker, requires a second, cannot be debated or amended, and requires a two-thirds vote.

We have endeavored to outline some of the basic rules for the benefit of the many people who want some simple knowledge of how to form an organization, how to conduct a meeting, or how to participate in one; also to help spectators at a convention understand what is going on. Beyond this, we refer you to the authorities on parliamentary procedure.

However important rules are for guidance in most human activities, there is no doubt that much is accomplished through informal discussion and action, and we do not hesitate to urge small friendly groups to do their business with as little formality and as few restrictions as possible. If this does not always work, we hope our book is there to serve you.



Approximate Mileage Indicated











## EUROPE AND THE NEAR EAST

■ Communist bloc

● Capital cities







**EURASIA 1956**

- Communist bloc
- Capital cities

0 Miles 1000



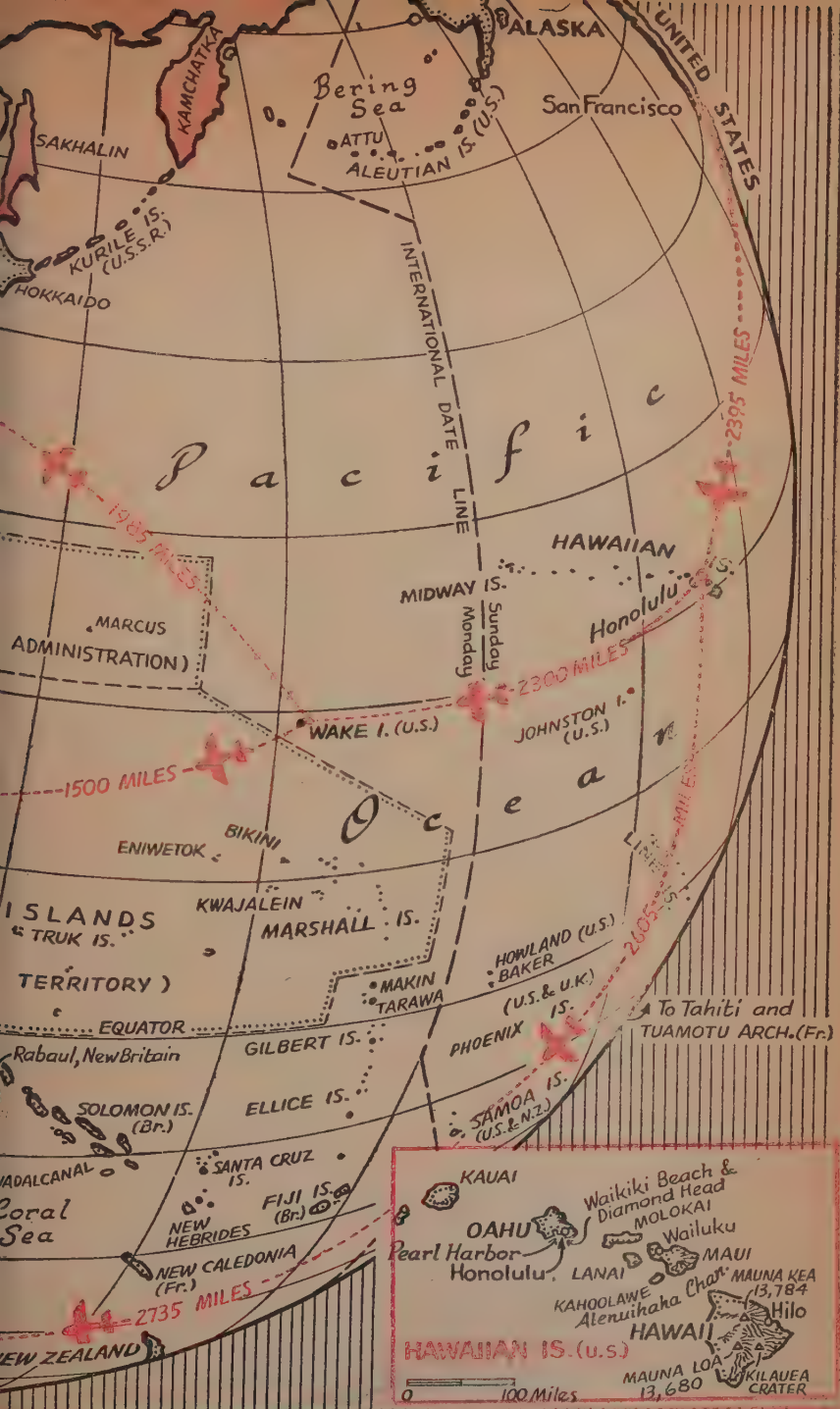


**FAR EAST AND PACIFIC**

This map illustrates the Far East and Pacific region, highlighting major landmasses, bodies of water, and political boundaries. Key features include:

- Landmasses and Countries:** China (with Outer Mongolia), Manchuria, Korea (N. and S.), Japan (including Ryukyu, Okinawa, and Bonin Islands), India, Pakistan, Burma, Thailand, Cambodia, Laos, Vietnam (N. and S.), Philippines (Luzon, Mindanao, and Leyte), Indonesia (including Sumatra, Java, Borneo, Celebes, and Irian Jaya), New Guinea, Papua New Guinea, and Australia.
- Major Cities and Towns:** Peking, Mukden, Vladivostok, Nanking, Chungking, Fochow, Canton, Hanoi, Saigon, Manila, Singapore, Jakarta, Perth, Darwin, Melbourne, Sydney, Brisbane, and many others.
- Geographical Features:** Yangtze R., Yellow R., Tiber, Ganges, and various islands like Formosa, Taiwan, and the Philippines.
- Political Boundaries:** Dashed lines indicate areas associated with Western Powers, such as the U.S.S.R., U.S. Trust Territory, and various colonial territories.
- Scale:** A scale bar at the bottom indicates 100 miles.

0 100 Miles













# LEGEND

INDEPENDENT  
 FRENCH SPHERE  
 SPANISH  
 BRITISH SPHERE

PORTUGAL  
 BELGIUM  
 ERITREA  
 FEDERATED WITH ETHIOPIA  
 ITALIAN SOMALILAND  
 U.N. TRUST TERRITORY





# CENTRAL AMERICA AND THE WEST INDIES

● Capitals

0 1000 Miles

Atlantic Ocean









0 Miles 500









GEOGRAPHICAL VIEW  
OF THE UNITED STATES

## Ocean





▲ MOUNTAIN PEAK  
Heights in feet

0 Miles 300





ITALY  
AUSTRIA  
SWITZERLAND

0 157 Miles 200

~ MOUNTAIN PASS  
Δ MOUNTAIN PEAK

# CROSSWORD PUZZLE GUIDE



Since most persons who can read and write occasionally or frequently indulge in the indoor pastime of working crossword puzzles, this section is offered as a handy help to solvers who may be stumped for a two-letter word meaning "three-toed sloth" or a three-letter word meaning "native of Mindanao."

We have those two words here, and plenty more. We have the Greek, Roman, Norse and Egyptian deities of myth and legend. And we have those "Greek letters" and "months of the Jewish year" so often needed to fill out little gaps.

The reader is warned that in mythology there are many confusing and even conflicting accounts of the identities and adventures of the various gods, goddesses and lesser figures. There is also considerable variation in the spelling of names, places and things. For instance, you may spell it ICON, IKON or EIKON, and similar options are plentiful all along the crossword line. If the reader will keep further possible variations in mind, it may help at a critical point.

Various other sections of our book will be found of use to the crossword puzzler—especially the section of world geography and statistics which begins on page 680.

## First Aid to Crossword Puzzlers

(We cannot, of course, begin to list all the odd words you will meet with in your daily and Sunday crossword puzzles, for such words run into many thousands. But we have tried to include those which turn up most frequently, as well as many others which should be of help to you when you are unable to go any further.)

Also, we do not guarantee that the definitions in your puzzle will be exactly the same as ours, although we have checked every word with a standard dictionary and have followed its definition.

In nearly every case, we have used as the key word the principal noun of the definition, rather than any adjective, adjective phrase, or noun used as an adjective. And, to simplify your searching, we have grouped the words according to the number of spaces you have to fill.)

### Words of Two Letters

Ambary, DA  
And (French, Latin), ET  
Article (Arabic), AL  
(French), LA, LE, UN  
(Spanish), EL, LA, UN  
At the (French), AU  
(Spanish), AL  
Behold, LO  
Bird: Hawaiian, OO  
Birthplace: Abraham's, UR  
Bone, OS  
Buddha, FO  
Butterfly: Peacock, IO  
Champagne, AY  
Chaos, NU  
Chief: Burmese, BO  
Coin: Roman, AS  
Siamese, AT  
Concerning, RE  
Dialect: Chinese, WU  
Double (Egy. relig.), KA  
Drama: Japanese, NO  
Egg (comb. form), OO  
Esker, OS  
Eye (Scotch), EE  
Factor: Amplification, MU  
Fifty (Greek), NU  
Fish: Carplike, ID  
Force, OD  
Forty (Greek), MU  
From (French, Latin, Spanish), DE  
(Latin prefix), AB

From the (French), DU  
God: Babylonian, EA, ZU  
Egyptian sun, RA  
Hindu unknown, KA  
Semitic, EL  
Goddess: Babylonian, AI  
Greek earth, GE  
Gold (heraldry), OR  
Gulf: Arctic, OB  
Heart (Egy. relig.) AB  
Indian: South American, GE  
King: Of Bashan, OG  
Language: Artificial, RO  
Assamese, AO  
Lava: Hawaiian, AA  
Letter: Greek, MU, NU, PI, XI  
Hebrew, HE, PE  
Lily: Palm, TI  
Measure: Annamese, LY  
Chinese, HO, HU, KO, LI, MU, PU, TO, TU  
Japanese, GO, JO, MO, RI, SE, TO  
Metric land, AR  
Netherlands, EL  
Portuguese, PE  
Siamese, WA  
Swedish, AM  
Type, EM, EN  
Monk: Buddhist, BO

Month: Jewish, AB  
Mouth, OS  
Mulberry: Indian, AL  
Native: Burmese, WA  
Note: Of Scale, DO, FA, MI, LA, RE, TI  
Of (French, Latin, Spanish), DE  
Of the (French), DU  
One (Scotch), AE  
Pagoda: Chinese, TA  
Plant: East Indian fiber, DA  
Ridge: Sandy, AS, OS  
River: Russian, OB  
Sloth: Three-toed, AI  
Soul (Egy. relig.), BA  
Sound: Hindu mystic, OM  
Suffix: Comparative, ER  
The. See Article  
To the; French, AU  
Spanish, AL  
Tree: Buddhist sacred, BO  
Tribe: Assamese, AQ  
Type: Jumbled, PI  
Weight: Annamese, TA  
Chinese, LI  
Danish, ES  
Japanese, MO  
Roman, AS  
Whirlwind: Faeroe Is., OE  
Yes (German), JA  
(Italian, Spanish), SI  
(Russian), DA

Adherent, IST  
 Again, BIS  
 Age, ERA  
 Antelope: African, GNU, KOB  
 Apricot: Japanese, UME  
 Article (German), DAS, DEM, DEN, DER, DES, DIE, EIN  
 (French), LES, UNE  
 (Spanish), LAS, LOS, UNA  
 Banana: Polynesian, FEI  
 Barge, HOY  
 Bass: African, IYO  
 Beak, NEB, NIB  
 Beard: Grain, AWN  
 Beetle: June, DOR  
 Being, ENS  
 Berry: Hawthorn, HAW  
 Beverage: Hawaiian, AVA  
 Bird: Australian, EMU  
 Crowlike, JAY  
 Extinct, MOA  
 Fabulous, ROC  
 Frigate, IWA  
 Parson, POE, TUE, TUI  
 Sea, AUK  
 Blackbird, ANI, ANO  
 Born, NEE  
 Bronze: Roman, AES  
 Bugle: Yellow, IVA  
 By way of, VIA  
 Canton: Swiss, URI  
 Cap: Turkish, FEZ  
 Catnip, NEP  
 Character: In "Faerie Queen," UNA  
 Coin: Afghan, PUL  
 Albanian, LEK  
 British Guiana, BIT  
 Bulgarian, LEV, LEW  
 French, ECU, SOU  
 Indian, PIE  
 Japanese, SEN, YEN  
 Korean, WON  
 Lithuanian, LIT  
 Macao, Timor, AVO  
 Palestinian, MIL  
 Persian, PUL  
 Peruvian, SOL  
 Rumanian, BAN, LEU, LEY  
 Scandinavian, ORE  
 Siamese, ATT  
 See also Money of account  
 Collection: Facts, ANA  
 Commune: Belgian, ANS, ATH  
 Netherlands, EDE, EPE  
 Community: Russian, MIR  
 Constellation: Southern, ARA  
 Contraction: Poetic, EEN, EER, OER  
 Covering: Apex of roof, EPI

# Words of Three Letters

Crab: Fiddler, UCA  
 Crag: Rocky, TOR  
 Cry: Crow, rook, raven, CAW  
 Cup: Wine, AMA  
 Cymbal: Oriental, TAL, ZEL  
 Disease: Silkworm, UJI  
 Division: Danish territorial, AMT  
 Geologic, EON  
 Doctrines, ISM  
 Dowry, DOT  
 Dry (French), SEC  
 Dynasty: Chinese, CHI, HAN, SUI, WEI, YIN  
 Eagle: Sea, ERN  
 Earth (comb. form), GEO  
 Egg: Louse, NIT  
 Eggs: Fish, ROE  
 Emmet, ANT  
 Enzyme, ASE  
 Equal (comb. form), ISO  
 Extension: building, ELL  
 Far (comb. form), TEL  
 Farewell, AVE  
 Fiber: Palm, TAL  
 Fintal, EPI  
 Fish: Carplike, IDE  
 Pikelike, GAR  
 Flatfish, DAB  
 Fleur-de-lis, LIS, LYS  
 Food: Hawaiian, POI  
 Formerly, NEE  
 Friend (French), AMI  
 Game: Card, LOO  
 Garment: Camel-hair, ABA  
 Gateway, DAR  
 Gazelle: Tibetan, GOA  
 Genus: Ducks, AIX  
 Grasses, POA  
 Grasses (maize), ZEA  
 Herbs or shrubs, IVA  
 Lizards, UTA  
 Rodents (incl. house mice), MUS  
 Ruminants (incl. cattle), BOS  
 Swine, SUS  
 Gibbon: Malay, LAR  
 God: Assyrian, SIN  
 Babylonian, ABU, ANU, BEL, HEA, SIN, UTU  
 Irish sea, LER  
 Phrygian, MEN  
 Polynesian, ORO  
 Goddess: Babylonian, AYA  
 Etruscan, UNI  
 Hindu, SRI, UMA, VAC  
 Teutonic, RAN  
 Governor: Algerian, DEY  
 Turkish, BEY  
 Grampus, ORC  
 Grape, UVA  
 Grass: Meadow, POA  
 Gypsy, ROM  
 Hail, AVE  
 Hare: Female, DOE  
 Hawthorn, HAW  
 Hay: Spread for drying, TED  
 Herb: Japanese, UDO  
 Perennial, PIA  
 Used for blue dye, WAD  
 Herd: Whales, GAM, POD  
 Hero: Spanish, CID  
 High (music), ALT  
 Honey (pharm.), MEL  
 Humorist: American, ADE  
 I (Latin), EGO  
 I love (Latin), AMO  
 Indian: Algonquian, FOX, SAC, WEA  
 Chimakuan, HOH  
 Keresan, SIA  
 Mayan, MAM  
 Shoshonean, UTE  
 Siouan, KAW, OTO  
 South American, ITE, ONA, URO, URU, YAO  
 Tierra del Fuego, ONA  
 Wakashan, AHT  
 Ingot, PIG  
 Inlet: Narrow, RIA  
 Island: Cyclades, IOS  
 Dodecanese, COS, KOS  
 (French), ILE  
 River, AIT  
 Jackdaw, DAW  
 John (Gaelic), IAN  
 Keelbill, ANI, ANO  
 Kiln, OST  
 King: British legendary, LUD  
 Kobold, NIS  
 Lace: To make, TAT  
 Lamprey, EEL  
 Language: Artificial, IDO  
 Bantu, ILA  
 Siamese, LAO, TAI  
 Leaf: Palm, OLA, OLE  
 Leaving, ORT  
 Left: Cause to turn, HAW  
 Letter: Greek, CHI, ETA, PHI, PSI, RHO, TAU  
 Hebrew, MEM, NUN, SIN, TAV, VAU  
 Lettuce, COS  
 Life (comb. form), BIO  
 Lily: Palm, TOI  
 Lizard, EFT  
 Louse: Young, NIT  
 Love (Anglo-Irish), GRA  
 Lute: Oriental, TAR  
 Macaw: Brazilian, ARA  
 Marble, TAW  
 Match: Shooting (French), TIR  
 Meadow, LEA  
 Measure: Abyssinian, TAT  
 Algerian, PIK  
 Annamese, GON, MAU, NGU, QUO, SAO, TAO, TAT  
 Arabian, DEN, SAA



Belgian, VAT  
 Bulgarian, OKA, OKE  
 Chinese, FEN, TOU, YIN  
 Cloth, ELL  
 Cyprus, OKA, OKE, PIK  
 Czech, LAN, SAH  
 Danish, FOD, MIL, POT  
 Dominican Republic, ONA  
 Dutch, old, AAM  
 East Indian, KIT  
 Egyptian, APT, HEN, PIK,  
 ROB  
 Electric, MHO, OHM  
 Energy, ERG  
 English, PIN  
 Estonian, TUN  
 French, POT  
 German, AAM  
 Greek, PIK  
 Hebrew, CAB, HIN, KOR,  
 LOG  
 Hungarian, AKO  
 Icelandic, FET  
 Indian, GAZ, GUZ, JOW,  
 KOS  
 Japanese, BOO, CHO,  
 KEN, RIN, SHO, SUN,  
 TAN  
 Malabar, ADY  
 Metric land, ARE  
 Netherlands, KAN, KOP,  
 MUD, VAT, ZAK  
 Norwegian, FOT, POT  
 Persian, GAZ, GUZ, MOU,  
 ZAR, ZER  
 Polish, CAL  
 Rangoon, DHA, LAN  
 Roman, PES, URN  
 Russian, FUT, LOF  
 Scotch, COP  
 Siamese, KEN, NIU, RAI,  
 SAT, SEN, SOK, WAH,  
 YOT  
 Somaliland, TOP  
 Spanish, PIE  
 Straits Settlements, PAU,  
 TUN  
 Swedish, ALN, FOT, MIL,  
 REF, TUM  
 Swiss, POT  
 Tunisian, SAA  
 Turkish, OKA, OKE, PIK  
 Wire, MIL  
 Württemberg, IMI  
 Yarn, LEA  
 Yugoslavian, OKA, RIF  
 Milk, LAC  
 Milkfish, AWA  
 Moccasin, PAC  
 Money: Yap stone, FEI  
 Money of Account: Anglo-  
 Saxon, ORA, ORE  
 French, SOU  
 Indian, LAC  
 Japanese, RIN  
 Oman, GAJ  
 Virgin Islands, BIT  
 See also COIN

Monkey: Capuchin, SAI  
 Morsel, ORT  
 Mother: Peer Gynt's, ASE  
 Mountain: Asia Minor, IDA  
 Mulberry: Indian, AAL,  
 ACH, AWL  
 Muttonbird: New Zealand,  
 OII  
 Nahoor, SNA  
 Native: Mindanao, ATA  
 Neckpiece, BOA  
 Newt, EFT  
 No (Scotch), NAE  
 Note: Guido's highest, ELA  
 Of scale, SOL  
 Nursemaid: Oriental, AMA,  
 IYA  
 Ocher: Yellow, SIL  
 One (Scotch), YIN  
 Ornament: Pagoda, TEE  
 Oven: Polynesian, UMU  
 Ox: Tibetan, YAK  
 Pagoda: Chinese, TAA  
 Parrot: Hawk, HIA  
 New Zealand, KEA  
 Part: Footlike, PES  
 Particle: Electrified, ION  
 Pasha, DEY  
 Pass: Mountain, COL  
 Paste: Rice, AME  
 Pea: Indian split, DAL  
 Peasant: Philippine, TAO  
 Penpoint, NEB, NIB  
 Piece out, EKE  
 Pigeon, NUN  
 Pine: Textile screw, ARA  
 Pistol (slang), GAT  
 Pit: Baking, IMU  
 Plant: Pepper, AVA  
 Play: By Capek, RUR  
 Poem: Old French, DIT  
 Porgy: Japanese, TAI  
 Priest: Biblical high, ELI  
 Prince: Ethiopian, RAS  
 Pseudonym: Dickens', BOZ  
 Queen: Fairy, MAB  
 Quince: Bengal, BEL  
 Record: Ship's, LOG  
 Refuse: Flax (Scotch), PAB,  
 POB  
 Resin, LAC  
 Resort, SPA  
 Revolver (slang), GAT  
 Right: Cause to turn, GEE  
 River: Scotch or English,  
 DEE (Spanish), RIO  
 Swiss, AAR  
 Room: Harem, ODA  
 Rootstock: Fern, ROI  
 Rose (Persian), GUL  
 Ruff: Female, REE  
 Rule: Indian, RAJ  
 Sailor, GOB, TAR  
 Saint: Female (abbr.), STE  
 Mohammedan, PIR  
 Salt, SAL  
 Sash: Japanese, OBI  
 Scrap, ORT

Seed: Poppy, MAW  
 Small, PIP  
 Self, EGO  
 Serpent: Vedic sky, AHI  
 Sesame, TIL  
 Sheep: Female, EWE  
 Indian, SHA  
 Male, RAM  
 Sheepfold (Scotch), REE  
 Shelter, LEE  
 Shield, ECU  
 Shooting match (French)  
 TIR  
 Shrew: European, ERD  
 Shrub: Evergreen, YEW  
 Silkworm, ERI  
 Snake, ASP, BOA  
 Soak, RET  
 Son-in-law: Mohammed's,  
 ALI  
 Sorrel: Wood, OCA  
 Spade: Long, narrow, LOY  
 Spirit: Malignant, KER  
 Spot: Playing-card, PIP  
 Spread for drying, TED  
 Spring: Mineral, SPA  
 Sprite: Water, NIX  
 Statesman: Japanese, ITO  
 Stern: Toward, AFT  
 Stomach: Bird's, MAW  
 Street (French), RUE  
 Summer (French), ETE  
 Sun, SOL  
 Swamp, BOG, FEN  
 Swan: Male, COB  
 Tea: Chinese, CHA  
 Temple: Shinto, SHA  
 The. See Article  
 Thing (law), RES  
 Title: Etruscan, LAR  
 Monk's, FRA  
 Portuguese, DOM  
 Spanish, DON  
 Turkish, AGA, BEY  
 Tool: Cutting, ADZ, AXE  
 Mining, GAD  
 Piercing, AWL  
 Tree: Candlenut, AMA  
 Central American, EBO  
 East Indian, SAJ, SAL  
 Evergreen, YEW  
 Hawaiian, KOA, KOU  
 Indian, BEL, DAR  
 Linden, LIN  
 New Zealand, AKE  
 Philippine, DAO, TUA  
 TUI  
 Rubber, ULE  
 South American, APA  
 Tribe: New Zealand, ATI  
 Tumeric, REA  
 Twice, BIS  
 Twin: Siamese, ENG  
 Uncle (dialect), EAM, EM  
 Veil: Chalice, AER, AER  
 Vessel: Wine, AMA  
 Vestment: Ecclesiastical,  
 ALB

Vetch: Bitter, ERS  
 Victorfish, AKU  
 Vine: New Zealand, AKA  
     Philippine, IYO  
 Wallaba, APA  
 Wapiti, ELK  
 Water (French), EAU  
 Waterfall, LIN  
 Watering place: Prussian,  
     EMS  
 Weave: Designating plain,  
     UNI  
 Weight: Annamese, CAN  
     Bulgarian, OKA, OKE  
     Burmese, MOO, VIS  
     Chinese, FEN, HAO, KIN,  
     SSU, TAN, YIN

Cyprus, OKA, OKE  
 Danish, LOD, ORT, VOG  
 East Indian, TJI  
 Egyptian, KAT, OKA, OKE  
 English, for wool, TOD  
 German, LOT  
 Greek, MNA, OKA, OKE  
 Indian, SER  
 Japanese, FUN, KIN, RIN,  
     SHI  
     Korean, KON  
     Malacca, KIP  
     Mongolian, LAN  
     Netherlands, ONS  
     Norwegian, LOD  
     Polish, LUT  
     Rangoon, PAI  
     Roman, BES

Russian, LOT  
 Siamese, BAT, HAP, PAI  
 Swedish, ASS, ORT  
 Turkish, OKA, OKE  
 Yugoslavian, OKA, OKE  
 Whales: Herd, GAM, POD  
 Wildebeest, GNU  
 Wing, ALA  
 Witticism, MOT  
 Wolframite, CAL  
 Worm: African, LOA  
 Wreath: Hawaiian, LEI  
 Yale, ELI  
 Yam: Hawaiian, HOI  
 Yes (French), OUI  
 Young: Bring forth, EAN  
 Z (letter), ZED

### Words of Four Letters

Aborigine: Borneo, DYAK  
 Agave, ALOE  
 Animal: Footless, APOD  
 Ant: White, ANAI, ANAY  
 Antelope: African, ASSE,  
     BISA, GUIB, KOBA,  
     KUDU, ORYX, POKU,  
     PUKU, TOPI, TORA  
 Apoplexy: Plant, ESCA  
 Apple, POME  
 Apricot, ANSU  
 Ardor, ELAN  
 Armadillo, APAR, PEBA,  
     PEVA, TATU  
 Ascetic: Mohammedan,  
     SUF  
 Association: Chinese, TONG  
 Astronomer: Persian, OMAR  
 Avatar: Of Vishnu, RAMA  
 Axillary, ALAR  
 Band: Horizontal (heral-  
     dry), FESS  
 Barracuda, SPET  
 Bark: Mulberry, TAPA  
 Base: Column, DADO  
 Bearing (heraldry), ORLE  
 Beer: Russian, KVAS  
 Beige, ECRU  
 Being, ESSE  
 Beverage: Japanese rice,  
     SAKE  
 Bird: Asian, MINA, MYNA  
     Egyptian sacred, IBIS  
     Extinct, DODO, MAMO  
     Flightless, KIWI  
     Gull-like, TERN  
     Hawaiian, IWI, MAMO  
     Parson, KOKO  
     Unfledged, EYAS  
 Birds: As class, AVES  
 Black, EBON  
     (French), NOIR  
 Blackbird: European, MERL  
 Boat: Flat-bottomed, DORY  
 Bone: Forearm, ULNA  
 Bones, OSSA  
 Box: Japanese, INRO  
 Bravo (rare), EUGE

Buffalo: Indian wild, ARNA  
 Bull (Spanish), TORO  
 Burden, ONUS  
 Cabbage: Sliced, SLAW  
 Caliph: Mohammedan,  
     OMAR  
 Canoe: Malay, PRAU, PROA  
 Cap: Military, KEPI  
 Cape, NESS  
 Capital: Ancient Irish,  
     TARA  
 Case: Article, ETUI  
 Cat: Wild, BALU, EYRA  
 Chalcedony, SARD  
 Chamber: Indian ceremo-  
     nial, KIVA  
 Channel: Brain, ITER  
 Cheese: Dutch, EDAM  
 Chest: Sepulchral stone,  
     CIST  
 Chieftain: Arab, EMIR  
 Church: Part of, APSE,  
     NAVE  
     (Scotch), KIRK  
 Claim (law), LIEN  
 Cluster: Flower, CYME  
 Coin: Chinese, TAEI, YUAN  
     German, MARK  
     Indian, ANNA  
     Iranian, RIAL  
     Italian, LIRA  
     Moroccan, OKIA  
     Siamese, BAHT  
     South American, PESO  
     Spanish, DURO, PESO  
     Turkish, PARA  
 Commune: Belgian, AATH  
 Composition: Musical,  
     OPUS  
 Compound: Chemical, DIOL  
 Constellation: Southern,  
     PAVO  
 Council: Russian, DUMA  
 Counsel, REDE  
 Covering: Seed, ARIL  
 Cross: Egyptian, ANKH  
 Cry: Bacchanalian, EVOE  
 Cup (Scotch), TASS

Cupbearer, SAKI  
 Dagger, DIRK  
     Malay, KRIS  
 Dam: River, WEIR  
 Dash, ELAN  
 Date: Roman, IDES  
 Dawn: Pertaining to, EOAN  
 Dean: English, INGE  
 Decay: In fruit, BLET  
 Deer: Sambar, MAHA  
 Disease: Skin, ACNE  
 Disk: Solar, ATEN  
 Dog: Hunting, ALAN  
 Drink: Hindu intoxicating,  
     SOMA  
 Duck, SMEE, SMEW, TEAL  
 Dynasty: Chinese, CHEN,  
     CHIN, CHOU, CHOW,  
     HSIA, MING, SUNG,  
     TANG, TSIN  
     Mongol, YUAN  
 Eagle: Biblical, GIER  
     Sea, ERNE  
 Egyptian: Christian, COPT  
 Ear: Pertaining to, OTIC  
 Entrance: Mine, ADIT  
 Esau, EDOM  
 Escutcheon: Voided, ORLE  
 Eskers, OSAR  
 Evergreen: New Zealand,  
     TAWA  
 Fairy: Persian, PERI  
 Family: Italian, ESTE  
 Far (comb. form), TELE  
 Farewell, VALE  
 Father (French), PERE  
 Fennel: Philippine, ANIS  
 Fever: Malarial, AGUE  
 Fiber: East Indian, JUTE  
 Firn, NEVE  
 Fish: Carplike, DACE  
     Hawaiian, ULUA  
     Herringlike, SHAD  
     Mackerellike, CERO  
     Marine, HAKE  
     Sea, LING, MERO, OPAH  
     Spiny-finned, GOBY  
 Food: Tropical, TARO

Foot: Metric, IAMB  
Formerly, ERST  
Founder: Of Carthage,  
DIDO

France: Southern, MIDI  
Furze, ULEX  
Gaelic, ERSE  
Gaiter, SPAT  
Game: Card, FARO, SKAT  
Garlic: European wild,  
MOLY

Garment: Hindu, SARI  
Roman, TOGA  
Gazelle, CORA  
Gem, JADE, ONYX, OPAL,  
RUBY

Genus: Amphibians (incl.  
frogs), RANA  
Amphibians (incl. tree  
toads), HYLEA  
Antelopes, ORYX  
Auks, ALCA, URIA  
Bees, APIS  
Birds (American os-  
triches), RHEA  
Birds (cranes), GRUS  
Birds (magpies), PICA  
Birds (peacocks), PAVO  
Cetaceans, INIA  
Ducks (incl. mallards),  
ANAS  
Fishes (burbots), LOTA  
Fishes (incl. bowfins),  
AMIA

Genus: Geese (snow geese),  
CHEN  
Gulls, XEMA  
Herbs, ARUM, GEUM  
Insects (water scorpions),  
NEPA  
Lilies, ALOE  
Mammals (mankind),  
HOMO  
Orchids, DISA  
Owls, ASIO, BUBO, OTUS  
Palms, NIPA  
Sea birds, SULA  
Sheep, OVIS  
Shrubs, Eurasian, ULEX  
Shrubs (hollies), ILEX  
Shrubs (incl. Virginia  
Willow), ITEA  
Shrubs, tropical, EVEA  
Snakes (sand snakes),  
ERYX  
Swans, QLOR  
Trees, chocolate, COLA  
Trees (ebony family),  
MABA  
Trees (incl. maples),  
ACER  
Trees (Olives), OLEA  
Trees, tropical, EVEA  
Turtles, EMYS

Goat: Wild, IBEX, KRAS,  
TAHR, TAIR, THAR  
God: Assyrian, ASUR

Babylonian, ADAD, ADDU,  
ENKI, ENZU, IRRA,  
NABU, NEBO, UTUG  
Celtic, LLEU, LLEW

Hindu, AGNI, CIVA,  
DEVA, DEWA, KAMA,  
RAMA, SIVA, VAYU  
Phrygian, ATYS  
Semitic, BAAL  
Teutonic, HLER

Goddess: Babylonian, ERUA,  
GULA  
Hawaiian, PELE  
Hindu, DEVI, KALI, SHRI,  
VACH

Gooseberry: Hawaiian,  
POHA  
Gourd, PEPO  
Grafted (heraldry), ENTE  
Grandfather (obsolete),  
AIEL

Grandparents: Pertaining  
to, AVAL

Grass: Hawaiian, HILO  
Gray (French), GRIS  
Green (heraldry), VERT  
Groom: Indian, SYCE  
Half (prefix), DEMI, HEMI,  
SEMI

Hamlet, DORP  
Hammer-head: Part of,  
PEEN

Handle, ANSA  
Harp: Japanese, KOTO  
Hartebeest, ASSE, TORA

Hautboy, OBOE  
Hawk: Taken from nest  
(falconry), EYAS

Hearing (law), OYER  
Heater: For liquids, ETNA  
Herb: Aromatic, ANET,  
DILL

Fabulous, MOLY  
Perennial, GEUM, SEGO  
Pot, WORT  
Used for blue dye, WADE,  
WOAD

Hill: Flat-topped, MESA  
Sand, DENE, DUNE  
Hoarfrost, RIME  
Hog: Immature female,  
GILT

Holly, ILEX  
House: Cow, BYRE  
(Spanish), CASA  
Ice: Floating, FLOE  
Image, ICON, IKON  
Incarnation: Of Vishnu,  
RAMA

Indian: Algonquian, CREE,  
SAUK  
Central American, MAYA  
Iroquoian, ERIE  
Mexican, CORA  
Peruvian, CANA, INCA,  
MORO  
Shoshonean, HOPI  
Siouan, OTOE

Southwestern, HOPI,  
PIMA, YUMA, ZUNI  
Insect: Immature, PUPA  
Instrument: Stringed,  
LUTE, LYRE

Ireland, EIRE, ERIN  
Jacket: English, ETON  
Jail (British), GAOL  
Jar, OLLA

Judge: Mohammedan, CAI  
Juniper: European, CADE  
Kiln, OAST, OVEN  
King: British, legendar  
LUDD, NUDD

Kiss, BUSS  
Knife: Philippine, BOLO  
Koran: Section of, SURA  
Laborer: Spanish American,  
PEON

Lake: Mountain, TARN  
(Scotch), LOCH  
Lamp: Miner's, DAVY  
Landing place: Indian,  
GHAT

Language: Buddhist, PALI  
Japanese, AINU  
Latvian, LETT  
Layer: Of iris, UVEA  
Leaf: Palm, OLAY, OLLA  
Legislature: Ukrainian,  
RADA

Lemur, LORI  
Leopard, PARD  
Let it stand, STET  
Letter: Greek, BETA, IOTA,  
ZETA

Hebrew, AYIN, BET  
CAPH, KOPH, RESH  
SHIN, TETH, YODH  
Papal, BULL

Lily, ALOE  
Literature: Hindu sacred,  
VEDA

Lizard, GILA  
Monitor, URAN  
Loquat, BIWA  
Magistrate: Genoese or Venetian, DOGE

Man (Latin), HOMO  
Mark: Omission, DELE  
Marmoset: South American,  
MICO

Meadow: Fertile, VEGA  
Measure: Electric, VOLT,  
WATT

Force, DYNE  
Hebrew, OMER  
Printing, PICA  
Spanish or Portuguese,  
VARA

Swiss land, IMMI  
Medley, OLIO  
Merganser, SMEW  
Milk (French), LAIT  
Molding, GULA  
Curved, OGEE  
Mongoose: Crab-eating,  
URVA



- Monk: Tibetan, LAMA  
 Monkey: African, MONA, WAAG  
 Ceylonese, MAHA  
 Cochín-China, DOUC  
 South American, SAKI, TITI  
 Monkshood, ATIS  
 Month: Jewish, ADAR, ELUL, IYAR  
 Mother (French), MERE  
 Mountain: Thessaly, OSSA  
 Mouse: Meadow, VOLE  
 Mythology: Norse, EDDA  
 Nail (French), CLOU  
 Native: Philippine, MORO  
 Nest: Of pheasants, NIDE  
 Network, RETE  
 No (German), NEIN  
 Noble: Mohammedan, AMIR  
 Notice: Death, OBIT  
 Novel: By Zola, NANA  
 Nursemaid: Oriental, AMAH, AYAH, EYAH  
 Nut: Philippine, PILI  
 Oak: Holm, ILEX  
 Oil (comb. form), OLEO  
 Ostrich: American, RHEA  
 Oven, KILN, OAST  
 Owl: Barn, LULU  
 Ox: Celebes wild, ANOE  
 Extinct wild, URUS  
 Palm, ATAP, NIPA, SAGO  
 Parliament, DIET  
 Parrot: New Zealand, KAKA  
 Pass: Indian mountain, GHAT  
 Passage: Closing (music), CODA  
 Peach: Clingstone, PAVY  
 Peasant: Indian, RYOT  
 Old English, CARL  
 Pepper: Australasian, KAVA  
 Perfume, ATAR  
 Persia, IRAN  
 Person: Extraordinary, ONER  
 Pickerel or pike, ESOX  
 Pitcher, EWER  
 Plant: Aromatic, NARD  
 Century, ALOE  
 Indigo, ANIL  
 Pepper, KAVA  
 Platform: Raised, DAIS  
 Plum: Wild, SLOE  
 Pods: Vegetable, OKRA, OKRO  
 Poem: Epic, EPOS  
 Poet: Persian, OMAR  
 Roman, OVID  
 Poison, BANE  
 Arrow, INEE  
 Porkfish, SISI  
 Portico: Greek, STOA  
 Premium, AGIO  
 Priest: Mohammedan, IMAM  
 Prima donna, DIVA  
 Prong: Fork, TINE  
 Pseudonym: Lamb's, ELIA  
 Queen: Carthaginian, DIDO  
 Hindu, RANI  
 Rabbit, CONY  
 Race: Of Japan, AINU  
 Rail: Ducklike, COOT  
 North American, SORA  
 Redshank, CLEE  
 Refuse: After pressing, MARC  
 Regiment: Turkish, ALAI  
 Reliquary, ARCA  
 Resort: Italian, LIDO  
 Ridges: Sandy, ASAR, OSAR  
 River: German, ELBE, ODER  
 Italian, ADDA  
 Siberian, LENA  
 Road: Roman, ITER  
 Rockfish: California, RENA  
 Rodent: Mouselike, VOLE  
 South American, PACA  
 Rootstock, TARO  
 Salamander, NEWT  
 Salmon: Silver, COHO  
 Young, PARR  
 Same (Greek), HOMO (Latin), IDEM  
 Sauce: Fish, ALEC  
 School: English, ETON  
 Seaweed, AGAR, ALGA, KELP  
 Secular, LAIC  
 Sediment, SILT  
 Seed: Dill, ANET  
 Of vetch, TARE  
 Serf, ILOT  
 Sesame, TEEL  
 Settlement: Eskimo, ETAH  
 Shark: Atlantic, GATA  
 European, TOPE  
 Sheep: Wild, UDAD  
 Sheltered, ALEE  
 Shield, EGIS  
 Ship: Jason's, ARGO  
 Left side of, PORT  
 Two-masted, BRIG  
 Shrine: Buddhist, TOPE  
 Shrub: New Zealand, TUTU  
 Sign: Magic, RUNE  
 Silkworm, ERIA  
 Skin: Beaver, PLEW  
 Skink: Egyptian, ADDA  
 Slave, ESNE  
 Sloth: Two-toed, UNAU  
 Smooth, LENE  
 Snow: Glacial, NEVE  
 Soapstone, TALC  
 Society: African secret, EGBO, PORO  
 Son: Of Seth, ENOS  
 Song (German), LIED  
 Unaccompanied, GLEE  
 Sound: Lung, RALE  
 Sour, ACID  
 Sow: Young, GILT  
 Spike: Brad-shaped, BROB  
 Spirit: Buddhist evil, MARA  
 Stake: Poker, ANTE  
 Star: Temporary, NOVA  
 Starch: East Indian, SAGO  
 Stone: Precious, OPAL  
 Strap: Bridle, REIN  
 Strewn (heraldry), SEME  
 Sweetsop, ATEs, ATTA  
 Sword: Fencing, EPEE, FOIL  
 Tambourine: African, TAAR  
 Tapir: Brazilian, ANTA  
 Tax, CESS  
 Tea: South American, MATE  
 Therefore (Latin), ERGO  
 Thing: Extraordinary, ONER  
 Three (dice, cards, etc.), TREY  
 Thrush: Hawaiian, OMAO  
 Tide, NEAP  
 Tipster: Racing, TOUT  
 Tissue, TELA  
 Title: Etruscan, LARS  
 Hindu, BABU  
 Indian, RAJA  
 Mohammedan, EMIR, IMAM  
 Persian, BABA  
 Spanish, DONA  
 Turkish, AGHA, BABA  
 Toad: Largest known, AGUA  
 Tree, HYL A  
 Tool: Cutting, ADZE  
 Track: Deer, SLOT  
 Tract: Sandy, DENE  
 Tree: Apple, SORB  
 Central American, EBOE  
 East Indian, TEAK  
 Eucalyptus, YATE  
 Guiana and Trinidad, MORA  
 Javanese, UPAS  
 Linden, LIME, LINN, TEIL, TILL  
 Sandarac, ARAR  
 Sassafras, AGUE  
 Tamarisk salt, ATLE  
 Tribe: Moro, SULU  
 Trout, CHAR  
 Urchin: Street, ARAB  
 Vessel: Arab, DHOW  
 Vestment: Ecclesiastical, COPE  
 Vetch, TARE  
 Vine: East Indian, SOMA  
 Violinist: Famous, AUER  
 Vortex, EDDY  
 Wampum, PEAG  
 Wapiti, STAG  
 Waste: Allowance for, TRET  
 Watchman: Indian, MINA  
 Water (Spanish), AGUA  
 Waterfall, LINN  
 Wavy (heraldry), ONDE, UNDE  
 Wax, CERE  
 Chinese, PELA

Weed: Biblical, TARE  
 Weight: Ancient, MINA  
 Danish (pl.), ESER  
 East Asian, TAEI  
 Greek, MINA  
 Siamese, BAHT  
 Well done (rare), EUGE  
 Whale, CETE

Killer, ORCA  
 White, HUSE, HUSO  
 Whirlpool, EDDY  
 Wife: Of Geraint, ENID  
 Willow: Virginia, ITEA  
 Wine, PORT  
 Winged, ALAR  
 (Heraldry), AILE

Wings, ALAE  
 Withered, SERE  
 Without (French), SANS  
 Wool: To comb, CARD  
 Work, OPUS  
 Wrong: Civil, TORT  
 Young: Bring forth, YEAN

### Words of Five Letters

Abode of dead: Babylonian, ARALU  
 Aborigine: Borneo, DAYAK  
 Aftersong, EPODE  
 Aloe, AGAVE  
 Animal: Footless, APODE  
 Ant, EMMET  
 Antelope: African, ADDAX, BEISA,  
 CAAMA, ELAND, GUIBA, ORIBI,  
 TIANG  
 Goat, GORAL, SEROW  
 Indian, SASIN  
 Siberian, SAIGA  
 Arch: Pointed, OGIVE  
 Armadillo, APARA, POYOU, TATOU  
 Arrowroot, ARARU  
 Artery: Trunk, AORTA  
 Association: Russian, ARTEL  
 Secret, CABAL  
 Author: English, READE  
 Automaton, GOLEM, ROBOT  
 Award: Motion-picture, OSCAR  
 Basket: Fishing, CREEL  
 Beer: Russian, KVAAS  
 Bible: Mohammedan, KORAN  
 Bird: Asian, MINAH, MYNAH  
 Indian, SHAMA  
 Larklike, PIPIT  
 Loonlike, GREBE  
 Oscine, VIREO  
 South American, AGAMI  
 Swimming, GREBE  
 Black: (French), NOIRE  
 (Heraldry), SABLE  
 Blackbird: European, MERLE, OUSEL,  
 OUZEL  
 Block: Glacial, SERAC  
 Blue (heraldry), AZURE  
 Boat: Eskimo, BIDAR, UMIK  
 Bobwhite, COLIN, QUAIL  
 Bone (comb. form), OSTEO  
 Leg, TIBIA  
 Thigh, FEMUR  
 Broom: Twig, BESOM  
 Brother (French), FRERE  
 Moses', AARON  
 Canoe: Eskimo, BIDAR, KAYAK  
 Cape: Papal, FANON, ORALE  
 Caravansary, SERAI  
 Card: Old playing, TAROT  
 Caterpillar: New Zealand, AWETO  
 Catkin, AMENT  
 Cavity: Stone, GEODE  
 Cephalopod, SQUID  
 Cetacean, WHALE  
 Chariot, ESSED  
 Cheek: Pertaining to, MALAR  
 Chieftain: Arab, EMEER  
 Child (Scotch), BAIRN

Cigar, CLARO  
 Coating: Seed, TESTA  
 Cockatoo: Palm, ARARA  
 Coin: Costa Rican, COLON  
 Danish, KRONE  
 Ecuadorian, SUCRE  
 English, GROAT, PENCE  
 French, FRANC  
 German, KRONE, TALER  
 Hungarian, PENGÓ  
 Icelandic, KRONA  
 Indian, RUPEE  
 Iraqi, DINAR  
 Norwegian, KRONE  
 Polish, ZLOTY  
 Russian, COPEC, KOPEK, RUBLE  
 Swedish, KRONA  
 Turkish, ASER  
 Yugoslav, DINAR  
 Collar: Papal, FANON, ORALE  
 Roman, RABAT  
 Commune: Italian, TREIA  
 Composition: Choral, MOTET  
 Compound: Chemical, ESTER  
 Conceal (law), ELOIN  
 Council: Ecclesiastical, SYNOD  
 Court: Anglo-Saxon, GEMOT  
 Inner, PATIO  
 Crest: Mountain, ARETE  
 Crown: Papal, TIARA  
 Cuttlefish, SEPIA  
 Date: Roman, NONES  
 Decree: Mohammedan, IRADE  
 Russian, UKASE  
 Deposit: Loam, LOESS  
 Desert: Gobi, SHAMO  
 Devilfish, MANTA  
 Disease: Cereals, ERGOT  
 Disk, PATEN  
 Dog: Wild, DHOLE, DINGO  
 Dormouse, LEROT  
 Drum, TABOR  
 Duck: Sea, EIDER  
 Dynasty: Chinese, CHING, LIANG, SHAN  
 Earthquake, SEISM  
 Eel, ELVER, MORAY  
 Ermine: European, STOAT  
 Ether: Crystalline, APIOL  
 Fabric: Velvetlike, PANNE  
 Fabulist, AESOP  
 Family: Italian, CENCI  
 Fiber: West Indian, SISAL  
 Fig: Smyrna, ELEME, ELEM  
 Figure: Of speech, TROPE  
 Finch: European, SERIN  
 Fish: American small, KILLY  
 Flower: Garden, ASTER  
 Friend (Spanish), AMIGO

Fruit: Tropical, MANGO  
 Fungus: Rye, ERGOT  
 Furze, GORSE  
 Gateway, TORAN, TORII  
 Gem, AGATE, BERYL, PEARL, TOPAZ  
 Genus: Barnacles, LEPAS  
 Bears, URSUS  
 Birds (loons), GAVIA  
 Birds (nuthatches), SITTA  
 Cats, FELIS  
 Dogs, CANIS  
 Fishes (chiros), ELOPS  
 Fishes (perch), PERCA  
 Geese, ANSER  
 Grasses, STIPA  
 Grasses (incl. oats), AVENA  
 Gulls, LARUS  
 Hares, rabbits, LEPUS  
 Hawks, BUTEO  
 Herbs, old world, INULA  
 Herbs, trailing or climbing, APIOS  
 Herbs, tropical, TACCA, URENA  
 Horses, EQUUS  
 Insects (olive flies), DACUS  
 Lice, plant, APHIS  
 Lichens, USNEA  
 Lizards, AGAMA  
 Moles, TALPA  
 Mollusks, OLIVA  
 Monkeys, CEBUS  
 Palms, ARECA  
 Pigeons, GOURA  
 Plants (amaryllis family), AGAVE  
 Ruminants (goats), CAPRA  
 Shrubs, Asiatic, SABIA  
 Shrubs (heath), ERICA  
 Shrubs (incl. raspberry), RUBUS  
 Shrubs, tropical, IXORA, TREMA,  
 URENA  
 Ticks, ARGAS  
 Trees (of elm family), TREMA, ULMUS  
 Trees, tropical, IXORA, TREMA  
 Goat: Bezoar, PASAN  
 God: Assyrian, ASHIR, ASHUR, ASSUR  
 Babylonian, DAGAN, SIRIS  
 Gaelic, DAGDA  
 Hindu, BHAGA, INDRA, SHIVA  
 Japanese, EBISU  
 Philistine, DAGON  
 Phrygian, ATTIS  
 Teutonic, AEGIR, GYMR  
 Welsh, DYLAN  
 Goddess: Babylonian, ISTAR, NANAI  
 Hindu, DURGA, GAURI, SHREE  
 Group: Of six, HEXAD  
 Grove: Sacred to Diana, NEMUS  
 Growing out, ENATE  
 Guitar: Hindu, SITAR  
 Gull: PEWEE, PEWIT  
 Hartebeest, CAAMA  
 Headdress: Jewish or Persian, TIARA  
 Liturgical, MITER, MITRE  
 Heath, ERICA  
 Herb: Grasslike marsh, SEDGE  
 Heron, EGRET  
 Hog: Young, SHOAT, SHOTE  
 Image, EIKON  
 Indian: Cariban, ARARA

Iroquoian, HURON  
 Mexican, AZTEC, OPATA, OTOMI  
 Muskogean, CREEK  
 Siouan, OSAGE, TETON  
 Spanish American, ARARA, CARIB  
 Inflorescence: Racemose, AMENT  
 Insect: Immature, LARVA  
 Intrigue, CABAL  
 Iris: Yellow, SEDGE  
 Juniper, GORSE, RETEM  
 Kidneys: Pertaining to, RENAL  
 King: British legendary, LLUDD  
 Kite: European, GLEDE  
 Kobold, NISSE  
 Land: Cultivated, ARADA, ARADO  
 Landholder (Scotch), LAIRD, THANE  
 Language: Dravidian, TAMIL  
 Lariat, LASSO, REATA  
 Laughing, RIAN  
 Lawgiver: Athenian, DRACO, SOLON  
 Leaf: Calyx, SEPAL  
 Fern, FROND  
 Lemur, LORIS  
 Letter: English, AITCH  
 Greek, ALPHA, DELTA, GAMMA,  
 KAPPA, OMEGA, SIGMA, THETA  
 Hebrew, ALEPH, CHETH, GIMEL,  
 SADHE, ZAYIN  
 Lichen, USNEA  
 Lighthouse, PHARE  
 Lizard: Old World, AGAMA  
 Loincloth, DHOTI  
 Louse: Plant, APHID  
 Macaw: Brazilian, ARARA  
 Mahogany: Philippine, ALMON  
 Mammal: Badgerlike, RATEL  
 Civetlike, GENET  
 Giraffelike, OKAPI  
 Raccoonlike, COATI  
 Man (French), HOMME  
 Marble, AGATE  
 Mark: Insertion, CARET  
 Market place: Greek, AGORA  
 Marsupial: Australian, KOALA  
 Measure: Electric, FARAD, HENRY  
 Energy, JOULE  
 Metric, LITER, STERE  
 Printing, AGATE  
 Russian, VERST  
 Mixture: Smelting, MATTE  
 Mohicans: Last of, UNCAS  
 Molding: Convex, OVOLO, TORUS  
 Mole, TALPA  
 Monkey: African, PATAS  
 Capuchin, SAJOU  
 Howling, ARABA  
 Monkshood, ATEES  
 Month: Jewish, NISAN, SIVAN, TEBET  
 Museum (French), MUSEE  
 Musketeer, ATHOS  
 Native: Aleutian, ALEUT  
 New Zealand, MAORI  
 Neckpiece: Ecclesiastical, AMICE  
 Nerve (comb. form), NEURO  
 Nest: Eagle's or hawk's, AERIE  
 Insect's, NIDUS  
 Net: Fishing, SEINE  
 Newsstand, KIOSK



- Nitrogen, AZOTE  
 Noble: Mohammedan, AMEER  
 Nodule: Stone, GEODE  
 Nostrils, NARES  
 Notched irregularly, EROSE  
 Nymph: Mohammedan, HOURI  
 Official: Roman, EDILE  
 Oleoresin, ELEMI  
 Opening: Mouthlike, STOMA  
 Oration: Funeral, ELOGE  
 Ostiole, STOMA  
 Page: Left-hand, VERSO  
       Right-hand, RECTO  
 Palm, ARECA, BETEL  
 Park: Colorado, ESTES  
 Perfume, ATTAR  
 Philosopher: Greek, PLATO  
 Pillar: Stone, STELA, STELE  
 Pinnacle: Glacial, SERAC  
 Plain, LLANO  
 Plant: Century, AGAVE  
       Climbing, LIANA  
       Dwarf, CUMIN  
       East Asian perennial, RAMIE  
       Medicinal, SENNA  
       Mustard family, CRESS  
 Plate: Communion, PATEN  
 Poem: Lyric, EPODE  
 Point: Lowest, NADIR  
 Poplar, ABELE, ALAMO, ASPEN  
 Porridge: Spanish American, ATOLE  
 Post: Stair, NEWEL  
 Priest: Mohammedan, IMAUM  
 Protozoan, AMEBA  
 Queen: (French), REINE  
       Hindu, RANEE  
 Rabbit, CONEY  
 Rail, CRAKE  
 Red (heraldry), GULES  
 Religion: Moslem, ISLAM  
 Resin, ELEMI  
 Revoke (law), ADEEM  
 Rich man, MIDAS, NABOB  
 Ridge: Sandy, ESKAR, ESKER  
 River: French, LOIRE, SEINE  
 Rockfish: California, REINA  
 Rootstock: Fragrant, ORRIS  
 Ruff: Female, REEVE  
 Sack: Pack, KYACK  
 Salt: Ethereal, ESTER  
 Saltpeter, NITER, NITRE  
 Salutation: Eastern, SALAM  
 Sandpiper: Old World, TEREK  
 Scented, OLENT  
 School: Fish, SHOAL  
       French public, LYCEE  
 Scriptures: Mohammedan, KORAN  
 Seaweeds, ALGAE  
 Seed: Aromatic, ANISE  
 Seraglio, HAREM, SERAI  
 Serf, HELOT  
 Sheep: Wild, AUDAD  
 Sheeplike, OVINE  
 Shield, AEGIS  
 Shoe: Wooden, SABOT  
 Shoots: Pickled bamboo, ACHAR  
 Shot: Billiard, CAROM, MASSE  
 Shrine: Buddhist, STUPA  
 Shrub: Burning bush, WAHOO  
       Ornamental evergreen, TOYON  
       Used in tanning, SUMAC  
 Silk: Watered, MOIRE  
 Sister (French), SOEUR  
       (Latin), SOROR  
 Six: Group of, HEXAD  
 Skeleton: Marine, CORAL  
 Slave, HELOT  
 Snake, ABOMA, ADDER, COBRA, RACON  
 Soldier: French, POILU  
       Indian, SEPOY  
 Sour, ACERB  
 Spirit: Air, ARIEL  
 Staff: Shepherd's, CROOK  
 Starwort, ASTER  
 Steel (German), STAHL  
 Stockade: Russian, ETAPE  
 Stop (nautical), AVAST  
 Storehouse, ETAPE  
 Subway: Parisian, METRO  
 Tapestry, ARRAS  
 Tea: Paraguayan, YERBA  
 Temple: Hawaiian, HEIAU  
 Terminal: Positive, ANODE  
 Theater: Greek, ODEON, ODEUM  
 Then (French), ALORS  
 Thread: Surgical, SETON  
 Thrush: Wilson's, VEERY  
 Title: Hindu, BABOO  
       Indian, RAJAH, SAHEB, SAHIB  
       Mohammedan, EMEER, IMAUM  
 Tree: Buddhist sacred, PIPAL  
       East Indian cotton, SIMAL  
       Hickory, PECAN  
       Light-wooded, BALSAM  
       Malayan, TERAP  
       Mediterranean, CAROB  
       Mexican, ABETO  
       Mexican pine, OCOTE  
       New Zealand, MAIRE  
       Philippine, ALMON  
       Rain, SAMAN  
       South American, UMBRA  
       Tamarack, LARCH  
       Tamarisk salt, ATLEE  
       West Indian, ACANA  
 Trout, CHARR  
 Troy, ILION, ILIUM  
 Twin: Siamese, CHANG  
 Vestment: Ecclesiastical, STOLE  
 Violin: Famous, AMATI, STRAD  
 Volcano: Mud, SALSE  
 Wampum, PEAGE  
 War cry: Greek, ALALA  
 Wavy (heraldry), UNDEE  
 Weight: Jewish, GERAH  
 Wen, TALPA  
 Wheat, SPELT  
 Wheel: Persian water, NORIA  
 Whitefish, CISCO  
 Willow, OSIER  
 Window: Bay, ORIEL  
 Wine, MEDOC, RHINE, TINTA, TOKAY  
 Winged, ALATE  
 Woman (French), FEMME  
 Year: Excess of solar over lunar, EPACT  
 Zoroastrian, PARSI

Words of Six or More Letters

- Agave, MAGUEY  
 Alkaloid: Crystalline, ESERIN, ESERINE  
 Alligator, CAYMAN  
 Amphibole, EDENITE, URALITE  
 Ant: White, TERMITE  
 Antelope: African, DIKDIK, DUIKER, GEMSBOK, IMPALA, KOODOO  
   European, CHAMOIS  
   Indian, NILGAI, NILGAU, NILGHAI, NILGHAI  
 Ape: Asian or East Indian, GIBBON  
 Appendage: Leaf, STIPEL, STIPULE  
 Armadillo, PELUDO, TATOUAY  
 Arrowroot, ARARAO  
 Ascetic: Jewish, ESSENE  
 Ass: Asian wild, ONAGER  
 Avatar: Of Vishnu, KRISHNA  
 Babylonian, ELAMITE  
 Badge: Shoulder, EPAULET  
 Baldness, ALOPECIA  
 Barracuda, SENNET  
 Bark: Aromatic, SINTOC  
 Bearlike, URSINE  
 Beetle, ELATER  
 Bible: Zoroastrian, AVESTA  
 Bird: Sea, PETREL  
   South American, SERIEMA  
   Wading, AVOCET, AVOSET  
 Bone: Leg, FIBULA  
 Branched, RAMATE  
 Brother (Latin), FRATER  
 Bunting: European, ORTOLAN  
 Call: Trumpet, SENNET  
 Canoe: Eskimo, BAIDAR, OOMIAK  
 Caravansary, IMARET  
 Cat: Asian or African, CHEETAH  
   Leopardlike, OCELOT  
 Cenobite: Jewish, ESSENE  
 Centerpiece: Table, EPERGNE  
 Cetacean, DOLPHIN, PORPOISE  
 Chariot, ESSEDA, ESSEDE  
 Chief: Seminole, OSCEOLA  
 Claim: Release as (law), REMISE  
 Clock: Water, CLEPSYDRA  
 Cloud, CUMULUS, NIMBUS  
 Coach: French hackney, FIACRE  
 Coin: Czech, KORUNA  
   Ethiopian, TALARI  
   Finnish, MARKKA  
   German, THALER  
   Greek, DRACHMA  
   Haitian, GOURDE  
   Honduran, LEMPIRA  
   Hungarian, FORINT  
   Indo-Chinese, PIASTER  
   Netherlands, GUILDER  
   Panamanian, BALBOA  
   Paraguayan, GUARANI  
   Portuguese, ESCUDO  
   Russian, COPECK, KOPECK, ROUBLE  
   Spanish, PESETA  
   Venezuelan, BOLIVAR  
 Communion: Last holy, VIATICUM  
 Conceal (law), ELOIGN  
 Confection, PRALINE  
 Construction: Sentence, SYNTAX  
 Convexity: Shaft of column, ENTASIS  
 Court: Anglo-Saxon, GEMOTE  
 Cow: Sea, DUGONG, MANATEE  
 Cylindrical, TERETE  
 Dagger, STILETTO  
   Malay, CREESE, KREESE  
 Date: Roman, CALENDIS, KALENDIS  
 Deer, CARIBOU, WAPITI  
 Disease: Plant, ERINOSE  
 Doorkeeper, OSTIARY  
 Dragonflies: Order of, ODANATA  
 Drink: Of gods, NECTAR  
 Drum: TABOUR  
   Moorish, ATABAL, ATTABAL  
 Duck: Fish-eating, MERGANSER  
   Sea, SCOTER  
 Dynasty: Chinese, MANCHU  
 Eel, CONGER  
 Edit, REDACT  
 Envelope: Flower, PERIANTH  
 Eskimo, AMERIND  
 Ether: Crystalline, APIOLE  
 Excuse (law), ESSOIN  
 Eyespots, OCELLI  
 Fabric, ESTAMENE, ESTAMIN, ETAMINE  
 Falcon: European, KESTREL  
 Figure: Used as column, CARYATID, TELAMON  
 Fine: For punishment, AMERCE  
 Fish: Asian fresh-water, GOURAMI  
   Pikelike, BARRACUDA  
 Five: Group of, PENTAD  
 Fly: African, TSETSE  
 Foot: Metric, ANAPEST, IAMBUS  
 Foxlike, VULPINE  
 Frying pan, SPIDER  
 Fur, KARAKUL  
 Galley: Greek or Roman, BIREME, TRIREME  
 Game: Card, ECARTE  
 Garment: Greek, CHLAMYS  
 Gateway, GOPURA, TORANA  
 Genus: Birds (ravens, crows), CORVUS  
   Eels, CONGER  
   Fishes, ANABAS  
   Foxes, VULPES  
   Herbs, ANEMONE  
   Insects, CICADA  
   Lemurs, GALAGO  
   Mints (incl. catnip), NEPETA  
   Mollusks, ANOMIA, ASTARTE, TEREDO  
   Mollusks (incl. oysters), OSTREA  
   Monkeys (spider monkeys), ATELES  
   Thrushes (incl. robins), TURDUS  
   Trees (of elm family), CELTIS  
   Trees (incl. dogwood), CORNUS  
   Trees, tropical American, SAPOTA  
   Wrens, NANNUS  
 Gibbon, SIAMANG, WOUWOU  
 Gland: Salivary, RACEMOSE  
 Goat: Bezoar, PASANG  
 Goatlike, CAPRINE  
 God: Assyrian, ASSHUR, ASSHUR  
   Babylonian, BABBAR, MARDUK, MERO-DACH, NANNAR, NERGAL, SHAMASH  
   Hindu, BRAHMA, KRISHNA, VISHNU  
   Tahitian, TAAROA  
 Goddess: Babylonian, ISHTAR

Hindu, CHANDI, HAIMAVATI,  
LAKSHMI, PARVATI, SARASVATI,  
SARASWATI  
Government, POLITY  
Governor: Persian, SATRAP  
Grandson (Scotch), NEPOTE  
Group: Of five, PENTAD  
Of nine, ENNEAD  
Of seven, HEPTAD  
Hare: In first year, LEVERET  
Harpichord, SPINET  
Herb: Alpine, EDELWEISS  
Chinese, GINSENG  
South African, FREESIA  
Hermit, EREMITTE  
Hero: Legendary, PALADIN  
Heron, BITTERN  
Horselike, EQUINE  
Hound: Short-legged, BEAGLE  
House (French), MAISON  
Idiot, CRETIN  
Implement: Stone, NEOLITH  
Incarnation: Hindu, AVATAR  
Indian, APACHE, COMMANCHE, PAIUTE,  
SENECA  
Inn: Turkish, IMARET  
Insects: Order of, DIPTERA  
Instrument: Japanese banjolike, SAMISEN  
Musical, CLAVIER, SPINET  
Interstice, AREOLA  
Ironwood, COLIMA  
Juniper: Old Testament, RAETAM  
Kettledrum, ATABAL  
King: Fairy, OBERON  
Kneecap, PATELLA  
Knife, MACHETE  
Langur: Sumatran, SIMPAI  
Legislature: Spanish, CORTES  
Lemur: African, GALAGO  
Madagascar, AYEAYE  
Letter: Greek, EPSILON, LAMBDA, OMI-  
CRON, UPSILON  
Hebrew: DALETH, LAMEDH, SAMEKH  
Lighthouse, PHAROS  
Lizard, IGUANA  
Llama, ALPACA  
Lockjaw, TETANUS  
Locust, CICADA, CICALA  
Macaw: Brazilian, MARACAN  
Maid: Of Astolat, ELAINE  
Mammal: Madagascar, TENDRAC,  
TENREC  
Man (Spanish), HOMBRE  
Marmoset: South American, TAMARIN  
Marsupial, BANDICOOT, WOMBAT  
Massacre, POGROM  
Mayor: Spanish, ALCALDE  
Measure: Electric, AMPERE, COULOMB,  
KILOWATT  
Medicine: Quack, NOSTRUM  
Member: Religious order, CENOBITE  
Molasses, TREACLE  
Monkey: African, GRIVET, NISNAS  
Asian, LANGUR  
Philippine, MACHIN  
South American, PINCHE, SAIMIRI,  
SAMIRI, SAPAJOU  
Monster, CHIMERA, GORGON

(Comb. form), TERATO  
Cretan, MINOTAUR  
Month: Jewish, HESHVAN, KISLEV, SHE-  
BAT, TAMMUZ, TISHRI, VEADAR  
Mountain: Asia Minor, ARARAT  
Mulct, AMERCE  
Musketeer, ARAMIS, PORTHOS  
Nearsighted, MYOPIC  
Net, TRAMMEL  
New York City, GOTHAM  
Nine: Group of, ENNEAD  
Nobleman: Spanish, GRANDEE  
Official: Roman, AEDILE  
Onyx: Mexican, TECALI  
Order: Dragonflies, ODANATA  
Insects, DIPTERA  
Organ: Plant, PISTIL  
Ornament: Shoulder, EPAULET  
Overcoat: Military, CAPOTE  
Ox: Wild, BANTENG  
Oxidation: Bronze or copper, PATINA  
Paralysis: Incomplete, PARESIS  
Pear: Alligator, AVOCADO  
Persimmon: Mexican, CHAPOTE  
Pipe: Peace, CALUMET  
Plaid (Scotch), TARTAN  
Plain, PAMPAS, STEPPE, TUNDRA  
Plant: Buttercup family, ANEMONE  
Century, MAGUEY  
On rocks, LICHEN  
Plowing: Fit for, ARABLE  
Poem: Heroic, EPOPEE  
Six-lined, SESTET  
Point: Highest, ZENITH  
Potion: Love, PHILTER, PHILTRE  
Protozoan, AMOEBA  
Punish, AMERCE  
Purple (heraldry), PURPURE  
Queen: Fairy, TITANIA  
Race: Skiing, SLALOM  
Rat, BANDICOOT, LEMMING  
Retort, RIPOST, RIPOSTE  
Ring: Harness, TERRET  
Little, ANNULET  
Rodent: Jumping, JERBOA  
Spanish American, AGOUTI, AGOUTY  
Sailor: East Indian, LASCAR  
Salmon: Young, GRILSE  
Salutation: Eastern, SALAAM  
Sandpiper, PLOVER  
Sandy, ARENOSE  
Sapodilla, SAPOTA, SAPOTE  
Saw: Surgical, TREPAN  
Seven: Group of, HEPTAD  
Sexes: Common to both, EPICENE  
Shawl: Mexican, SERAPE  
Sheathing: Flower, SPATHE  
Sheep: Wild, AOUDAD, ARGALI  
Shipworm, TEREDO  
Shoes: Mercury's winged, TALARIA  
Shortening: Syllable, SYSTOLE  
Shrub, SPIRAEA  
Sickle-shaped, FALCATE  
Silver (heraldry), ARGENT  
Snake, ANACONDA  
Speech: Loss of, APHASIA  
Spiral, HELICAL  
Staff: Bishop's, CROSIER, CROZIER



Stalk: Plant, PETIOLE  
 State: Swiss, CANTON  
 Studio, ATELIER  
 Swan: Young, CYGNET  
 Swimming, NATANT  
 Sword-shaped, ENSATE  
 Terminal: Negative, CATHODE  
 Third (music), TIERCE  
 Thrust: Fencing, RIPOST, RIPOSTE  
 Tile: Pertaining to, TEGULAR  
 Tomb: Empty, CENOTAPH  
 Tooth (comb. form), ODONTO  
 Tower: Mohammedan, MINARET  
 Tree: African timber, BAOBAB  
     Black gum, TUPELO  
     East Indian, MARGOSA  
     Locust, ACACIA  
     Malayan, SINTOC  
     Marmalade, SAPOTE  
 Urn: Tea, SAMOVAR  
 Vehicle, LANDAU, TROIKA

Verbose, PROLIX  
 Viceroy: Egyptian, KHEDIVE  
 Vulture: American, CONDOR  
 Warehouse (French), ENTREPOT  
 Whale: White, BELUGA  
 Whirlpool, VORTEX  
 Will: Addition to, CODICIL  
     Having left, TESTATE  
 Wind, CHINOOK, MONSOON, SIMOOM,  
     SIMOON, SIROCCO  
 Window: In roof, DORMER  
 Wine, BARBERA, BURGUNDY, CABER-  
     NET, CHABLIS, CHIANTI, CLARET,  
     MUSCATEL, RIESLING, SAUTERNE,  
     SHERRY, ZINFANDEL  
 Wolfish, LUPINE  
 Woman: Boisterous, TERMAGANT  
     Woolly, LANATE  
 Workshop, ATELIER  
 Zoroastrian, PARSEE

## Old-Testament Names

(We do not pretend that this list is all-inclusive. We include only those names which in our opinion one meets most often in crossword puzzles.)

AARON: First high priest of Jews; son of Amram; brother of Miriam and Moses; father of Abihu, Eleazer, Ithamar, and Nadab.

ABEL: Son of Adam; slain by Cain.

ABIGAIL: Wife of Nabal; later, wife of David.

ABIHU: Son of Aaron.

ABIMELECH: King of Gerar.

ABNER: Commander of army of Saul and Ishbosheth; slain by Joab.

ABRAHAM (or ABRAM): Patriarch; forefather of the Jews; son of Terah; husband of Sarah; father of Isaac and Ishmael.

ABSALOM: Son of David and Maacah; revolted against David; slain by Joab.

ACHISH: King of Gath; gave refuge to David.

ACHSA (or ACHSAH): Daughter of Caleb; wife of Othniel.

ADAH: Wife of Lamech.

ADAM: First man; husband of Eve; father of Cain, Abel, and Seth.

ADONIJAH: Son of David and Haggith.

AGAG: King of Amalek; spared by Saul; slain by Samuel.

AHASUERUS: King of Persia; husband of Vashti and, later, Esther; sometimes identified with Xerxes the Great.

AHIJAH: Prophet; foretold accession of Jeroboam.

AHINOAM: Wife of David.

AMASA: Commander of army of David; slain by Joab.

AMNON: Son of David and Ahinoam; ravished Tamar; slain by Absalom.

AMRAM: Husband of Jochebed; father of Aaron, Miriam and Moses.

ASENATH: Wife of Joseph.

ASHER: Son of Jacob and Zilpah.

BALAAM: Prophet; rebuked by his donkey for cursing God.

BARAK: Jewish captain; associated with Deborah.

BARUCH: Secretary to Jeremiah.

BATHSHEBA: Wife of Uriah; later, wife of David.

BELSHAZZAR: Crown prince of Babylon.

BENAIAH: Warrior of David; proclaimed Solomon King.

BEN-HADAD: Name of several kings of Damascus.

BENJAMIN: Son of Jacob and Rachel.

BEZALEEL: Chief architect of tabernacle.

BILDAD: Comforter of Job.

BILBAH: Servant of Rachel; mistress of Jacob.

BOAZ: Husband of Ruth; father of Obed.

CAIN: Son of Adam and Eve; slayer of Abel; father of Enoch.

CAINAN: Son of Enos.

CALEB: Spy sent out by Moses to visit Canaan; father of Achsa.

CANAAN: Son of Ham.

CHILION: Son of Elimelech; husband of Orpah.

CUSH: Son of Ham; father of Nimrod.

DAN: Son of Jacob and Bilhah.

DANIEL: Prophet; saved from lions by God.

DEBORAH: Hebrew prophetess; helped Israelites conquer Canaanites.

DELILAH: Mistress and betrayer of Samson.

ELAM: Son of Shem.

ELEAZAR: Son of Aaron; succeeded him as high priest.

ELI: High priest and judge; teacher of Samuel; father of Hophni and Phinehas.

ELIAKIM: Chief minister of Hezekiah.

ELIEZER: Servant of Abraham.

ELIHU: Comforter of Job.

**ELIJAH** (or **ELIAS**): Prophet; went to heaven in chariot of fire.  
**ELIMELECH**: Husband of Naomi; father of Chilion and Mahlon.

**ELIPHAZ**: Comforter of Job.

**ELISHA** (or **ELISEUS**): Prophet; successor of Elijah.

**ELKANAH**: Husband of Hannah; father of Samuel.

**ENOCH**: Son of Cain.

**ENOCH**: Father of Methuselah.

**ENOS**: Son of Seth; father of Cainan.

**EPHRAIM**: Son of Joseph.

**ESAU**: Son of Isaac and Rebecca; sold his birthright to his brother Jacob.

**ESTHER**: Jewish wife of Ahasuerus; saved Jews from Haman's plotting.

**EVE**: First woman; created from rib of Adam.

**EZRA** (or **ESDRAS**): Hebrew scribe and priest.

**GAD**: Son of Jacob and Zilpah.

**GEHAZI**: Servant of Elisha.

**GIDEON**: Israelite hero; defeated Midianites.

**GOLIATH**: Philistine giant; slain by David.

**HAGAR**: Handmaid of Sarah; concubine of Abraham; mother of Ishmael.

**HAGGITH**: Mother of Adonijah.

**HAM**: Son of Noah; father of Cush, Mizraim, Phut, and Canaan.

**HAMAN**: Chief minister of Ahasuerus; hanged on gallows prepared for Mordecai.

**HANNAH**: Wife of Elkanah; mother of Samuel.

**HANUN**: King of Ammonites.

**HARAN**: Brother of Abraham; father of Lot.

**HAZAEI**: King of Damascus.

**HEPHZI-BAH**: Wife of Hezekiah; mother of Mannaseh.

**HIRAM**: King of Tyre.

**HOLOFERNES**: General of Nebuchadnezzar; slain by Judith.

**HOPHNI**: Son of Eli.

**ISAAC**: Hebrew patriarch; son of Abraham and Sarah; half brother of Ishmael; husband of Rebecca; father of Esau and Jacob.

**ISHMAEL**: Son of Abraham and Hagar; half brother of Isaac.

**ISSACHAR**: Son of Jacob and Leah.

**ITHAMAR**: Son of Aaron.

**JABAL**: Son of Lamech and Adah.

**JABIN**: King of Hazor.

**JACOB**: Hebrew patriarch, founder of Israel; son of Isaac and Rebecca; husband of Leah and Rachel; father of Asher, Benjamin, Dan, Gad, Issachar, Joseph, Judah, Levi, Naphtali, Reuben, Simeon, and Zebulun.

**JAEI**: Slayer of Sisera.

**JAPHETH**: Son of Noah.

**JEHOIADA**: High priest; husband of Jehoshabeath; revolted against Athaliah and made Joash King of Judah.

**JEHOSHABEATH** (or **JEHOSHEBA**): Daughter of Jehoram of Judah; wife of Jehoiada.

**JEPHTHAH**: Judge in Israel; sacrificed his only daughter because of vow.

**JESSE**: Son of Obed; father of David.

**JETHRO**: Midianite priest; father of Zipporah.

**JEZEBEL**: Phoenician princess; wife of Ahab; mother of Ahaziah, Athaliah, and Jehoram.

**JOAB**: Commander in chief under David; slayer of Abner, Absalom, and Amasa.

**JOB**: Patriarch; underwent many afflictions; comforted by Bildad, Elihu, Eliphaz and Zophar.

**JOCHEBED**: Wife of Amram.

**JONAH**: Prophet; cast into sea and swallowed by great fish.

**JONATHAN**: Son of Saul; friend of David.

**JOSEPH**: Son of Jacob and Rachel; sold into slavery by his brothers; husband of Asenath; father of Ephraim and Manassah.

**JOSHUA**: Successor of Moses; son of Nun.

**JUBAL**: Son of Lamech and Adah.

**JUDAH**: Son of Jacob and Leah.

**JUDITH**: Slayer of Holofernes.

**KISH**: Father of Saul.

**LABAN**: Father of Leah and Rachel.

**LAMECH**: Son of Methuselah; father of Noah.

**LAMECH**: Husband of Adah and Zillah; father of Jabal, Jubal, and Tubal-Cain.

**LEAH**: Daughter of Laban; wife of Jacob.

**LEVI**: Son of Jacob and Leah.

**LOT**: Son of Haran; escaped destruction of Sodom.

**MAACAH**: Mother of Absalom and Tamar.

**MAHLON**: Son of Elimelech; first husband of Ruth.

**MANASSEH**: Son of Joseph.

**MELCHIZEDEK**: King of Salem.

**METHUSELAH**: Patriarch; son of Enoch father of Lamech.

**MICHAEL**: Daughter of Saul; wife of David.

**MIRIAM**: Prophetess; daughter of Amram; sister of Aaron and Moses.

**MIZRAIM**: Son of Ham.

**MORDECAI**: Uncle of Esther; with her, saved Jews from Haman's plotting.

**MOSES**: Prophet and lawgiver; son of Amram; brother of Aaron and Miriam husband of Zipporah.

**NAAMAN**: Syrian captain; cured of leprosy by Elisha.

**NABAL**: Husband of Abigail.

**NABOTH**: Owner of vineyard; stoned to death because he would not sell it to Ahab.

**NADAB**: Son of Aaron.

**NAHOR**: Father of Terah.

NAOMI: Wife of Elimelech; mother-in-law of Ruth.

NAPHTALI: Son of Jacob and Bilhah.

NATHAN: Prophet; reproved David for causing Uriah's death.

NEBUCHADNEZZAR (or NEBUCHAD-REZZAR): King of Babylon; destroyer of Jerusalem.

NEHEMIAH: Jewish leader; empowered by Artaxerxes to rebuild Jerusalem.

NIMROD: Mighty hunter; son of Cush.

NOAH: Patriarch; Son of Lamech; escaped Deluge by building Ark; father of Ham, Japheth and Shem.

NUN (or NON): Father of Joshua.

OBED: Son of Boaz; father of Jesse.

OG: King of Bashan.

ORPAH: Wife of Chilion.

OTHNIEL: Kenezite; judge of Israel; husband of Achsa.

PHINEHAS: Son of Eleazer.

PHINEHAS: Son of Eli.

PHUT (or PUT): Son of Ham.

POTIPHAR: Egyptian official; bought Joseph.

RACHEL: Wife of Jacob.

REBECCA (or REBEKAH): Wife of Isaac.

REUBEN: Son of Jacob and Leah.

RUTH: Wife of Mahlon, later of Boaz; daughter-in-law of Naomi.

SAMSON: Judge of Israel; famed for strength; betrayed by Delilah.

SAMUEL: Hebrew judge and prophet; son of Elkanah.

SARAH (or SARA, SARAI): Wife of Abraham.

SENNACHERIB: King of Assyria.

SETH: Son of Adam; father of Enos.

SHEM: Son of Noah; father of Elam.

SIMEON: Son of Jacob and Leah.

SISERA: Canaanite captain; slain by Jael.

TAMAR: Daughter of David and Maachah; ravished by Amnon.

TERAH: Son of Nabor; father of Abraham.

TUBAL-CAIN: Son of Lamech and Zillah.

URIAH: Husband of Bathsheba; sent to death in battle by David.

VASHTI: Wife of Ahasuerus; set aside by him.

ZADOK: High priest during David's reign.

ZEBULUN (or ZABULON): Son of Jacob and Leah.

ZILLAH: Wife of Lamech.

ZILPAH: Servant of Leah; mistress of Jacob.

ZIPPORAH: Daughter of Jethro; wife of Moses.

ZOPHAR: Comforter of Job.

## Kings of Judah and Israel

### Kings Before Division of Kingdom

SAUL: First King of Israel; son of Kish; father of Ish-Bosheth, Jonathan and Michal.

ISH-BOSHETH (or ESHBAAL): King of Israel; son of Saul.

DAVID: King of Judah; later of Israel; son of Jesse; husband of Abigail, Ahinoam, Bathsheba, Michal, etc.; father of Absalom, Adonijah, Amnon, Solomon, Tamar, etc.

SOLOMON: King of Israel and Judah; son of David; father of Rehoboam.

REHOBOM: Son of Solomon; during his reign the kingdom was divided into Judah and Israel.

### Kings of Judah (Southern Kingdom)

REHOBOM: First King.

ABIJAH (or ABIJAM or ABIA): Son of Rehoboam.

ASA: Probably son of Abijah.

JEHOSHAPHAT: Son of Asa.

JEHORAM (or JORAM): Son of Jehoshaphat; husband of Athaliah.

AHAZIAH: Son of Jehoram and Athaliah.

ATHALIAH: Daughter of King Ahab of Israel and Jezebel; wife of Jehoram.

JOASH (or JEHOASH): Son of Ahab.

AMAZIAH: Son of Joash.

UZZIAH (or AZARIAH): Son of Amaziah.

JOTHAM: Regent, later King; son of Uzziah.

AHAZ: Son of Jotham.

HEZEKIAH: Son of Ahaz; husband of Hephzi-Bah.

MANASSEH: Son of Hezekiah and Hephzi-Bah.

AMON: Son of Manasseh.

JOSIAH (or JOSIAS): Son of Amon.

JEHOIAH (or JOAH): Son of Josiah.

JEHOIAKIM: Son of Josiah.

JEHOIACHIN: Son of Jehoiakim.

ZEDEKIAH: Son of Josiah; kingdom overthrown by Babylonians under Nebuchadnezzar.

### Kings of Israel (Northern Kingdom)

JEHOIAH I: Led secession of Israel.

NADAB: Son of Jeroboam I.

BAASHA: Overthrew Nadab.

ELAH: Son of Baasha.

ZIMRI: Overthrew Elah.

OMRI: Overthrew Zimri.

AHAB: Son of Omri; husband of Jezebel.

AHAZIAH: Son of Ahab.

JEHORAM (or JORAM): Son of Ahab.

JEHU: Overthrew Jehoram.

JEHOIAH (or JOAH): Son of Jehu.

JEHOASH (or JOASH): Son of Jehoiah.



JEROBOAM II: Son of Jehoash.  
 ZECHARIAH: Son of Jeroboam II.  
 SHALLUM: Overthrew Zechariah.  
 MENAHEM: Overthrew Shallum.

PEKAHIAH: Son of Menahem.  
 PEKAH: Overthrew Pekahiah.  
 HOSHEA: Overthrew Pekah; kingdom  
 overthrown by Assyrians under Sargon II.

## Prophets

### Major

ISAIAH

JEREMIAH

EZEKIEL

DANIEL

### Minor

HOSEA

OBADIAH

NAHUM

HAGGAI

JOEL

JONAH

HABAKKUK

ZECHARIAH

AMOS

MICAH

ZEPHANIAH

MALACHI

## Foreign Phrases

(NOTE: The English meanings given are not necessarily literal translations.)

AB OVO: From the beginning.  
 ABSIT OMEN: Hope this is no bad luck.  
 AEQUO ANIMO: Undisturbed in mind.  
 AD VALOREM: According to its value.  
 ALEA JACTA EST: The die is cast.  
 ALMA MATER: One's college or school.  
 ALTER EGO: Other self.  
 AMICUS CURIAE: Friend of the court.  
 ANNO DOMINI: Year of our Lord.  
 BEL CANTO: A style of singing marked  
 by virtuosity and beauty.

BETE NOIRE: Particular nemesis.  
 BONA FIDE: In good faith; genuine.  
 CARPE DIEM: Enjoy today.  
 CASUS BELLI: Cause of war.  
 CAVEAT EMPTOR: Buy at your own  
 risk.

CORPUS DELICTI: Fundamental fact or  
 facts necessary to commission of a crime.  
 CUI BONO: To whose advantage?  
 CUM GRANO SALIS: With a grain of  
 salt.

DE FACTO: As a matter of fact; because  
 of this fact.

DEO GRATIAS: Thanks be to God.  
 DEUS EX MACHINA: Artificially pro-  
 duced to bring a solution of some extreme  
 difficulty.

ECCE HOMO: This is the man.  
 ERRARE HUMANUM (EST): To err is  
 human.

FESTINALENTE: Make haste slowly.  
 FIAT LUX: Let there be light.  
 FIDUS ACHATES: Faithful friend.

FLAGRANTE DELICTO: Caught in the  
 act.

HABEAS CORPUS: Common-law writ to  
 bring a person before a court or judge.

HIC JACET: Here lies. . . .

HOI POLLOI: The common people.

HONORIS CAUSA: For the sake of  
 honor.

HORS D'OEUVRES: Side dishes.  
 IN VINO VERITAS: In wine there is  
 truth.

IPSE DIXIT: An assertion made but not  
 proved.

IPSO FACTO: By the very fact.  
 JEUNESSE DOREE: Gilded youth.  
 LABOR OMNIA VINCIT: Work over-  
 comes all things.

LAISSEZ FAIRE: Noninterference.  
 MIRABILE DICTU: Wonderful to relate.  
 MULTUM IN PARVO: Much in little.  
 NIL ADMIRARI: To be astonished at  
 nothing.

NOLENS, VOLENS: Willy-nilly.  
 O TEMPORA! O MORES!: What sad  
 times and customs!

PERSONA GRATA: A favored person.  
 POST MORTEM: After death.  
 PRO BONO PUBLICO: For the public  
 welfare.

PRO TEMPORE: For the time being.  
 RARA AVIS: Extraordinary person or  
 thing.

REQUIESCAT IN PACE: Rest in peace.  
 SAVOIR FAIRE: Know-how; manners  
 for all occasions.

SINE DIE: With no day set for the next  
 meeting.

SINE QUA NON: Indispensable.  
 SPIRITUS FRUMENTI: Alcohol.  
 STATUS (IN) QUO: State in which any-  
 thing is.

SUI GENERIS: In a class by itself.  
 SURSUM CORDA: Lift up your hearts.  
 TEMPUS FUGIT: Time flies.  
 ULTIMA THULE: The limit in an ideal  
 way.

VAE VICTIS: Woe to the conquered.  
 VENI, VIDI, VICI: I came, I saw, I  
 conquered.

## Greek and Roman Mythology

(Most of the Greek deities were adopted by the Romans, although in many cases there was a change of name. In the list below, information is given under the Greek name; the name in parentheses is the Latin equivalent. However, all Latin names are listed with cross references to the Greek ones. In addition, there are several deities which were exclusively Roman.)

- ACHERON:** *See* Rivers.
- ACHILLES:** Greek warrior; slew Hector at Troy; slain by Paris, who wounded him in his vulnerable heel.
- ACTAEON:** Hunter; surprised Artemis bathing; changed by her to stag and killed by his dogs.
- ADMETUS:** King of Thessaly; his wife, Alcestis, offered to die in his place.
- ADONIS:** Beautiful youth loved by Aphrodite.
- AEACUS:** One of three judges of dead in Hades; son of Zeus.
- AEETES:** King of Colchis; father of Medea; keeper of Golden Fleece.
- AEGEUS:** Father of Theseus; believing Theseus killed in Crete, he drowned himself, Aegean Sea named for him.
- AEGISTHUS:** Son of Thyestes; slew Atreus; with Clytemnestra, his paramour, slew Agamemnon; slain by Orestes.
- AEGYPTUS:** Brother of Danaüs; his sons, except Lynceus, slain by Danaides.
- AENEAS:** Trojan; son of Anchises and Aphrodite; after fall of Troy, led his followers eventually to Italy; loved and deserted Dido.
- AEOLUS:** *See* Winds.
- AESCLAPIUS:** *See* Asclepius.
- AESON:** King of Iolus; father of Jason; overthrown by his brother Pelias; restored to youth by Medea.
- AETHER:** Personification of sky.
- AETHRA:** Mother of Theseus.
- AGAMEMNON:** King of Mycenae; son of Atreus; brother of Menelaus; leader of Greeks against Troy; slain on his return home by Clytemnestra and Aegisthus.
- AGLAIA:** *See* Graces.
- AJAX:** Greek warrior; killed himself at Troy because Achilles' armor was awarded to Odysseus.
- ALCESTIS:** Wife of Admetus; offered to die in his place but saved from death by Hercules.
- ALCMENE:** Wife of Amphitryon; mother by Zeus of Hercules.
- ALCYONE:** *See* Pleiades.
- ALECTO:** *See* Furies.
- ALECTRYON:** Youth changed by Ares into cock.
- ALTHAEA:** Wife of Oeneus; mother of Meleager.
- AMAZONS:** Female warriors in Asia Minor; supported Troy against Greeks.
- AMOR:** *See* Eros.
- AMPHION:** Musician; husband of Niobe; charmed stones to build fortifications for Thebes.
- AMPHITRITE:** Sea goddess; wife of Poseidon.
- AMPHITRYON:** Husband of Alcmena.
- ANCHISES:** Father of Aeneas.
- ANCILE:** Sacred shield that fell from heavens; palladium of Rome.
- ANDRAEMON:** Husband of Dryope.
- ANDROMACHE:** Wife of Hector.
- ANDROMEDA:** Daughter of Cepheus; chained to cliff for monster to devour; rescued by Perseus.
- ANTEIA:** Wife of Proetus; tried to induce Bellerophon to elope with her.
- ANTEROS:** God who avenged unrequited love.
- ANTIGONE:** Daughter of Oedipus; accompanied him to Colonus; performed burial rite for Polynices and was buried alive.
- ANTINOÜS:** Leader of suitors of Penelope; slain by Odysseus.
- APHRODITE (VENUS):** Goddess of love and beauty; daughter of Zeus; mother of Eros.
- APOLLO:** God of beauty, poetry, music; later identified with Helios as Phoebus Apollo; son of Zeus and Leto.
- AQUILO:** *See* Winds.
- ARACHNE:** Maiden who challenged Athena to weaving contest; changed to spider.
- ARES (MARS):** God of war; son of Zeus and Hera.
- ARGO:** Ship in which Jason and followers sailed to Colchis for Golden Fleece.
- ARGUS:** Monster with hundred eyes; slain by Hermes; his eyes placed by Hera into peacock's tail.
- ARIADNE:** Daughter of Minos; aided Theseus in slaying Minotaur; deserted by him on island of Naxos and married to Dionysus.
- ARION:** Musician; thrown overboard by pirates but saved by dolphin.
- ARTEMIS (DIANA):** Goddess of moon; huntress; twin sister of Apollo.
- ASCLEPIUS (AESCLAPIUS):** Mortal son of Apollo; slain by Zeus for raising dead; later deified as god of medicine. Also known as Asklepios.
- ASTARTE:** Phoenician goddess of love; variously identified with Aphrodite, Selene, and Artemis.

**ASTRAEA:** Goddess of Justice; daughter of Zeus and Themis.

**ATALANTA:** Princess who challenged her suitors to a foot race; Hippomenes won race and married her.

**ATHENA (MINERVA):** Goddess of wisdom; known poetically as Pallas Athene; sprang fully armed from head of Zeus.

**ATLAS:** Titan; held world on his shoulders as punishment for warring against Zeus; son of Iapetus.

**ATREUS:** King of Mycenae; father of Menelaus and Agamemnon; brother of Thyestes, three of whose sons he slew and served to him at banquet; slain by Aegisthus.

**ATROPOS:** *See* Fates.

**AURORA:** *See* Eos.

**AUSTER:** *See* Winds.

**AVERNUS:** Infernal regions; name derived from small vaporous lake near Vesuvius which was fabled to kill birds and vegetation.

**BACCHUS:** *See* Dionysus.

**BELLEROPHON:** Corinthian hero; killed Chimera with aid of Pegasus; tried to reach Olympus on Pegasus and was thrown to his death.

**BELLONA:** Roman goddess of war.

**BOREAS:** *See* Winds.

**BRIAREUS:** Monster of hundred hands; son of Uranus and Gaea.

**BRISEIS:** Captive maiden given to Achilles; taken by Agamemnon in exchange for loss of Chryseis, which caused Achilles to cease fighting, until death of Patroclus.

**CADMUS:** Brother of Europa; planter of dragon seeds from which first Thebans sprang.

**CALLIOPE:** *See* Muses.

**CALYPSO:** Sea nymph; kept Odysseus on her island Ogygia for seven years.

**CASSANDRA:** Daughter of Priam; prophetess who was never believed; slain with Agamemnon.

**CASTOR:** *See* Dioscuri.

**CELAENO:** *See* Pleiades.

**CENTAURS:** Beings half man and half horse; lived in mountains of Thessaly.

**CEPHALUS:** Hunter; accidentally killed his wife Procris with his spear.

**CEPHEUS:** King of Ethiopia; father of Andromeda.

**CERBERUS:** Three-headed dog guarding entrance to Hades.

**CERES:** *See* Demeter.

**CHAOS:** Formless void; personified as first of gods.

**CHARON:** Boatman on Styx who carried souls of dead to Hades; son of Erebus.

**CHARYBDIS:** Female monster; personification of whirlpool.

**CHIMERA:** Female monster with head of lion, body of goat, tail of serpent; killed by Bellerophon.

**CHIRON:** Most famous of centaurs.

**CHRONOS:** Personification of time.

**CHRYSEIS:** Captive maiden given to Agamemnon; his refusal to accept ransom from her father Chryses caused Apollo to send plague on Greeks besieging Troy.

**CIRCE:** Sorceress; daughter of Helios; changed Odysseus' men into swine.

**CLIO:** *See* Muses.

**CLOTHO:** *See* Fates.

**CLYTEMNESTRA:** Wife of Agamemnon whom she slew with aid of her paramour Aegisthus; slain by her son Orestes.

**COCYTUS:** *See* Rivers.

**CREON:** Father of Jocasta; forbade burial of Polynices; ordered burial alive of Antigone.

**CREÜSA:** Princess of Corinth, for whom Jason deserted Medea; slain by Medea, who sent her poisoned robe; also known as Glauke.

**CREÜSA:** Wife of Aeneas; died fleeing Troy.

**CRONUS (SATURN):** Titan; god of harvests; son of Uranus and Gaea; dethroned by his son Zeus.

**CUPID:** *See* Eros.

**CYBELE:** Anatolian nature goddess adopted by Greeks and identified with Rhea.

**CYCLOPES:** Race of one-eyed giants (singular: Cyclops).

**DAEDALUS:** Athenian artificer; father of Icarus; builder of Labyrinth in Crete; devised wings attached with wax for him and Icarus to escape Crete.

**DANAË:** Princess of Argos; mother of Perseus by Zeus, who appeared to her in form of golden shower.

**DANAÏDES:** Daughters of Danaüs; at his command, all except Hypermnestra slew their husbands, the sons of Aegyptus.

**DANAÛS:** Brother of Aegyptus; father of Danaïdes; slain by Lynceus.

**DAPHNE:** Nymph; pursued by Apollo; changed to laurel tree.

**DECUMA:** *See* Fates.

**DEINO:** *See* Graeae.

**DEMETER (CERES):** Goddess of agriculture; mother of Persephone.

**DIANA:** *See* Artemis.

**DIDO:** Founder and queen of Carthage; stabbed herself when deserted by Aeneas.

**DIOMEDES:** Greek hero; with Odysseus entered Troy and carried off Palladium; sacred statue of Athena.

**DIOMEDES:** Owner of man-eating horses, which Hercules, as ninth labor, carried off.



**DIONE:** Titan goddess; mother by Zeus of Aphrodite.

**DIONYSUS (BACCHUS):** God of wine; son of Zeus and Semele.

**DIOSCURI:** Twins Castor and Pollux; sons of Leda by Zeus.

**DIS:** See Hades.

**DRYADS:** Wood nymphs.

**DRYCOPE:** Maiden changed to Hamadryad.

**ECHO:** Nymph who fell hopelessly in love with Narcissus; faded away except for her voice.

**ELECTRA:** Daughter of Agamemnon and Clytemnestra; sister of Orestes; urged Orestes to slay Clytemnestra and Aegisthus.

**ELECTRA:** See Pleiades.

**ELYSIUM:** Abode of blessed dead.

**ENDYMION:** Mortal loved by Selene.

**ENYO:** See Graeae.

**EOS (AURORA):** Goddess of dawn.

**EPIMETHEUS:** Brother of Prometheus; husband of Pandora.

**ERATO:** See Muses.

**EREBUS:** Spirit of darkness; son of Chaos.

**ERINYES:** See Furies.

**ERIS:** Goddess of discord.

**EROS (AMOR or CUPID):** God of love; son of Aphrodite.

**ETEOCLES:** Son of Oedipus, whom he succeeded to rule alternately with Polynices; refused to give up throne at end of year; he and Polynices slew each other.

**EUMENIDES:** See Furies.

**EUPHROSYNE:** See Graces.

**EUROPA:** Mortal loved by Zeus, who, in form of white bull, carried her off to Crete.

**EURUS:** See Winds.

**EURYALE:** See Gorgons.

**EURYDICE:** Nymph; wife of Orpheus.

**EURYSTHEUS:** King of Argos; imposed twelve labors on Hercules.

**EUTERPE:** See Muses.

**FATES:** Goddesses of destiny: Clotho (Spinner of thread of life), Lachesis (Determiner of length), and Atropos (Cutter of thread); also called Moirae. Identified by Romans with their goddesses of fate; Nona, Decuma, and Morta; called Parcae.

**FAUNS:** Roman deities of woods and groves.

**FAUNUS:** See Pan.

**FAVONIUS:** See Winds.

**FLORA:** Roman goddess of flowers.

**FORTUNA:** Roman goddess of fortune.

**FURIES:** Avenging spirits: Alecto, Megaera, and Tisiphone; known also as Erinyes or Eumenides.

**GAEA:** Goddess of earth; daughter of Chaos; mother of Titans; known also as Ge, Gea, Gaia, etc.

**GALATEA:** Statue of maiden carved from ivory by Pygmalion; given life by Aphrodite.

**GALATEA:** Sea nymph; loved by Polyphemus.

**GANYMEDE:** Beautiful boy; successor to Hebe as cupbearer of gods.

**GLAUCUS:** Mortal who became sea divinity by eating magic grass.

**GLAUKE:** See Creüsa.

**GOLDEN FLEECE:** Fleece from ram that flew Phrixos to Colchis; Aëtes placed it under guard of dragon; carried off by Jason.

**GORGONS:** Female monsters: Euryale, Medusa, and Stheno; had snakes for hair; their glances turned mortals to stone. See Medusa.

**GRACES:** Beautiful goddesses: Aglaia (Brilliance), Euphrosyne (Joy), and Thalia (Bloom); daughters of Zeus.

**GRAEAE:** Sentinels for Gorgons: Delno, Enyo, and Pephredo; had one eye among them, which passed from one to another.

**HADES (DIS):** Name sometimes given Pluto; also, abode of dead, ruled by Pluto.

**HAEMON:** Son of Creon; promised husband of Antigone; killed himself in her tomb.

**HAMADRYADS:** Tree nymphs; lived and died with trees they inhabited.

**HARPIES:** Monsters with heads of women and bodies of birds.

**HEBE (JUVENTAS):** Goddess of youth; cupbearer of gods before Ganymede; daughter of Zeus and Hera.

**HECATE:** Goddess of sorcery and witchcraft.

**HECTOR:** Son of Priam; slayer of Patroclus; slain by Achilles.

**HECUBA:** Wife of Priam.

**HELEN:** Fairest woman in world; daughter of Zeus and Leda; wife of Menelaus; carried to Troy by Paris, causing Trojan War.

**HELIADES:** Daughters of Helios; mourned for Phaëthon and were changed to poplar trees.

**HELIOS (SOL):** God of sun; later identified with Phoebus Apollo.

**HELLE:** Sister of Phrixos; fell from ram of Golden Fleece; water where she fell named Hellespont.

**HEPHAESTUS (VULCAN):** God of fire; celestial blacksmith; son of Zeus and Hera; husband of Aphrodite.

**HERA (JUNO):** Queen of heaven; wife of Zeus.

**HERCULES:** Hero and strong man; son of Zeus and Alcmena; performed twelve

labors or deeds to be free from bondage under Eurystheus; after death, his mortal share was destroyed, and he became immortal. Also known as Herakles or Heracles. Labors: (1) killing Nemean lion; (2) killing Lernaean Hydra; (3) capturing Erymanthian boar; (4) capturing Cerynean hind; (5) killing man-eating Stymphalian birds; (6) procuring girdle of Hippolyte; (7) cleaning Augean stables; (8) capturing Cretan bull; (9) capturing man-eating horses of Diomedes; (10) capturing cattle of Geryon; (11) procuring golden apples of Hesperides; (12) bringing Cerberus up from Hades.

**HERMES (MERCURY):** God of physicians and thieves; messenger of gods; son of Zeus and Maia.

**HERO:** Priestess of Aphrodite; Leander swam Hellespont nightly to see her; drowned herself at his death.

**HESPERUS:** Evening star.

**HESTIA (VESTA):** Goddess of hearth; sister of Zeus.

**HIPPOLYTE:** Queen of Amazons; wife of Theseus.

**HIPPOLYTUS:** Son of Theseus and Hippolyte; falsely accused by Phaedra of trying to kidnap her; slain by Poseidon at request of Theseus.

**HIPPOMENES:** Husband of Atalanta, whom he beat in foot race by dropping golden apples, which she stopped to pick up.

**HYACINTHUS:** Beautiful youth accidentally killed by Apollo, who caused flower to spring up from his blood.

**HYDRA:** Nine-headed monster in marsh of Lerna; slain by Hercules.

**HYGEIA:** Personification of health.

**HYMEN:** God of marriage.

**HYPERION:** Titan; early sun god; father of Helios.

**HYPERMNESTRA:** Daughter of Danaüs; refused to kill her husband Lynceus.

**HYPNOS (SOMNUS):** God of sleep.

**IAPETUS:** Titan; father of Atlas, Epimetheus, and Prometheus.

**ICARUS:** Son of Daedalus; flew too near sun with wax-attached wings and fell into sea and was drowned.

**IO:** Mortal maiden loved by Zeus; changed by Hera into heifer.

**IOBATES:** King of Lycia; sent Bellerophon to slay Chimera.

**IPHIGENIA:** Daughter of Agamemnon; offered as sacrifice to Artemis at Aulis; carried by Artemis to Tauris where she became priestess; escaped from there with Orestes.

**IRIS:** Goddess of rainbow; messenger of Zeus and Hera.

**ISMENE:** Daughter of Oedipus; sister of Antigone.

**IULUS:** Son of Aeneas.

**IXION:** King of Lapithae; for making love to Hera he was bound to endlessly revolving wheel in Tartarus.

**JANUS:** Roman god of gates and doors; represented with two opposite faces.

**JASON:** Son of Aeson; to gain throne of Iolus from Pelias, went to Colchis and brought back Golden Fleece; married Medea; deserted her for Creusa.

**JOCASTA:** Wife of Laius; mother of Oedipus; unwittingly became wife of Oedipus; hanged herself when relationship was discovered.

**JUNO:** See Hera.

**JUPITER:** See Zeus.

**JUVENTAS:** See Hebe.

**LACHEISIS:** See Fates.

**LAIUS:** Father of Oedipus, by whom he was slain.

**LAOCOÖN:** Priest of Apollo at Troy; warned against bringing wooden horse into Troy; destroyed with his two sons by serpents sent by Athena.

**LAES:** Roman ancestral spirits protecting descendants and homes.

**LAVINIA:** wife of Aeneas after defeat of Turnus.

**LEANDER:** Swam Hellespont nightly to see Hero; drowned in storm.

**LEDA:** Mortal loved by Zeus in form of Swan; mother of Helen, Clytemnestra, Dioscuri.

**LETHE:** See Rivers.

**LETO (LATONA):** Mother by Zeus of Artemis and Apollo.

**LUCINA:** Roman goddess of childbirth; identified with Juno.

**LYNCEUS:** Son of Aegyptus; husband of Hypermnestra; slew Danaüs.

**MAIA:** Daughter of Atlas; mother of Hermes.

**MAIA:** See Pleiades.

**MANES:** Souls of dead Romans, particularly of ancestors.

**MARS:** See Ares.

**MARSYAS:** Shepherd; challenged Apollo to music contest and lost; flayed alive by Apollo.

**MEDEA:** Sorceress; daughter of Aëtes; helped Jason obtain Golden Fleece; when deserted by him for Creusa, killed her children and Creusa.

**MEDUSA:** Gorgon; slain by Perseus, who cut off her head.

**MEGAERA:** See Furies.

**MELEAGER:** Son of Althaea; his life would last as long as brand burning at his birth; Althaea quenched and saved it but destroyed it when Meleager slew his uncles.

**MELPOMENE:** See Muses.

**MEMNON:** Ethiopian king; made immortal by Zeus; son of Tithonus and Eos.

**MENELAUS:** King of Sparta; son of Atreus; brother of Agamemnon; husband of Helen.

**MERCURY:** *See* Hermes.

**MEROPE:** *See* Pleiades.

**MEZENTIUS:** Cruel Etruscan king; ally of Turnus against Aeneas; slain by Aeneas.

**MIDAS:** King of Phrygia; given gift of turning to gold all he touched.

**MINERVA:** *See* Athena.

**MINOS:** King of Crete; after death, one of three judges of dead in Hades; son of Zeus and Europa.

**MINOTAUR:** Monster, half man and half beast, kept in Labyrinth in Crete; slain by Theseus.

**MNEMOSYNE:** Goddess of memory; mother by Zeus of Muses.

**MOIRAE:** *See* Fates.

**MOMUS:** God of ridicule.

**MORPHEUS:** God of dreams.

**MORS:** *See* Thanatos.

**MORTA:** *See* Fates.

**MUSES:** Goddesses presiding over arts and sciences: Calliope (epic poetry), Clio (history), Erato (lyric and love poetry), Euterpe (music), Melpomene (tragedy), Polymnia or Polyhymnia (sacred poetry), Terpsichore (choral dance and song), Thalia (comedy and bucolic poetry), Urania (astronomy); daughters of Zeus and Mnemosyne.

**NAIADS:** Nymphs of waters, streams, and fountains.

**NAPAEAE:** Wood nymphs.

**NARCISSUS:** Beautiful youth loved by Echo; in punishment for not returning her love, he was made to fall in love with his image reflected in pool; pined away and became flower.

**NEMESIS:** Goddess of retribution.

**NEOPTOLEMUS:** Son of Achilles; slew Priam; also known as Pyrrhus.

**NEPTUNE:** *See* Poseidon.

**NEREIDS:** Sea nymphs; attendants on Poseidon.

**NESTOR:** King of Pylos; noted for wise counsel in expedition against Troy.

**NIKE:** Goddess of victory.

**NIOBE:** Daughter of Tantalus; wife of Amphion; her children slain by Apollo and Artemis; changed to stone but continued to weep her loss.

**NONA:** *See* Fates.

**NOTUS:** *See* Winds.

**NOX:** *See* Nyx.

**NYMPHS:** Beautiful maidens; inferior deities of nature.

**NYX (NOX):** Goddess of night.

**OCEANIDS:** Ocean nymphs; daughters of Oceanus.

**OCEANUS:** Eldest of Titans; god of waters.

**ODYSSEUS (ULYSSES):** King of Ithaca; husband of Penelope; wandered ten years after fall of Troy before arriving home.

**OEDIPUS:** King of Thebes; son of Laius and Jocasta; unwittingly murdered Laius and married Jocasta; tore his eyes out when relationship was discovered.

**OENONE:** Nymph of Mount Ida; wife of Paris, who abandoned her; refused to cure him when he was poisoned by arrow of Philoctetes at Troy.

**OPS:** *See* Rhea.

**OREADS:** Mountain nymphs.

**ORESTES:** Son of Agamemnon and Clytemnestra; brother of Electra; slew Clytemnestra and Aegisthus; pursued by Furies until his purification by Apollo.

**ORION:** Hunter; slain by Artemis and made heavenly constellation.

**ORPHEUS:** Famed musician; son of Apollo and Muse Calliope; husband of Eurydice.

**PALES:** Roman goddess of shepherds and herdsmen.

**PALINURUS:** Aeneas' pilot; fell overboard in his sleep and was drowned.

**PAN (FAUNUS):** God of woods and fields; part goat; son of Hermes.

**PANDORA:** Opener of box containing human ills; mortal wife of Epimetheus.

**PARCAE:** *See* Fates.

**PARIS:** Son of Priam; gave apple of discord to Aphrodite, for which she enabled him to carry off Helen; slew Achilles at Troy; slain by Philoctetes.

**PATROCLUS:** Great friend of Achilles; wore Achilles' armor and was slain by Hector.

**PEGASUS:** Winged horse that sprang from Medusa's body at her death; ridden by Bellerophon when he slew Chimera.

**PELIAS:** King of Iolcus; seized throne from his brother Aeson; sent Jason for Golden Fleece; slain unwittingly by his daughters at instigation of Medea.

**PELOPS:** Son of Tantalus; his father cooked and served him to gods; restored to life; Peloponnesus named for him.

**PENATES:** Roman household gods.

**PENELOPE:** Wife of Odysseus; waited faithfully for him for ten years while putting off numerous suitors.

**PEPHREDO:** *See* Graecae.

**PERIPHETES:** Giant; son of Hephaestus; slain by Theseus.

**PERSEPHONE (PROSERPINE):** Queen of infernal regions; daughter of Zeus and Demeter; wife of Pluto.

**PERSEUS:** Son of Zeus and Danaë; slew Medusa; rescued Andromeda from monster and married her.

**PHAEDRA:** Daughter of Minos; wife of Theseus; falsely accused Hippolytus of trying to kidnap her.



**PHAETHON:** Son of Helios; drove his father's sun chariot and was struck down by Zeus before he set world on fire.

**PHILOCTETES:** Greek warrior who possessed Hercules' bow and arrows; slew Paris at Troy with poisoned arrow.

**PHINEUS:** Betrothed of Andromeda; tried to slay Perseus but turned to stone by Medusa's head.

**PHLEGETHON:** *See* Rivers.

**PHOSPHOR:** Morning star.

**PHRIXOS:** Brother of Helle; carried by ram of Golden Fleece to Colchis.

**PIRITHOÛS:** Son of Ixion; friend of Theseus; tried to carry off Persephone from Hades; bound to enchanted rock by Pluto.

**PLEIADES:** Alcyone, Celaeno, Electra, Maia, Merope, Sterope or Asterope, Taygeta; seven daughters of Atlas; transformed into heavenly constellation, of which six stars are visible (Merope is said to have hidden in shame for loving a mortal).

**PLUTO (DIS):** God of Hades; brother of Zeus.

**PLUTUS:** God of wealth.

**POLLUX:** *See* Dioscuri.

**POLYMNIA:** *See* Muses.

**POLYNICES:** Son of Oedipus; he and his brother Eteocles killed each other; burial rite, forbidden by Creon, performed by his sister Antigone.

**POLYPHEMUS:** Cyclops; devoured six of Odysseus' men; blinded by Odysseus.

**POLYXENA:** Daughter of Priam; betrothed to Achilles, whom Paris slew at their betrothal; sacrificed to shade of Achilles.

**POMONA:** Roman goddess of fruits.

**PONTUS:** Sea god; son of Gaea.

**POSEIDON (NEPTUNE):** God of sea; brother of Zeus.

**PRIAM:** King of Troy; husband of Hecuba; ransomed Hector's body from Achilles; slain by Neoptolemus.

**PRIAPUS:** God of regeneration.

**PROCRIS:** Wife of Cephalus, who accidentally slew her.

**PROCRUSTES:** Giant; stretched or cut off legs of victims to make them fit iron bed; slain by Theseus.

**PROETUS:** Husband of Anteia; sent Belerophon to Iobates to be put to death.

**PROTEUS:** Sea god; assumed various shapes when called on to prophesy.

**PSYCHE:** Beloved of Eros; punished by jealous Aphrodite; made immortal and united with Eros.

**PYGMALION:** King of Cyprus; carved ivory statue of maiden which Aphrodite gave life as Galatea.

**PYRAMUS:** Babylonian youth; made love to Thisbe through hole in wall; thinking Thisbe slain by lion, killed himself.

**PYRRHUS:** *See* Neoptolemus.

**PYTHON:** Serpent born from slime left by Deluge; slain by Apollo.

**QUIRINUS:** Roman war god.

**REMUS:** Brother of Romulus; slain by him.

**RHADAMANTHUS:** One of three judges of dead in Hades; son of Zeus and Europa.

**RHEA (OPS):** Daughter of Uranus and Gaea; wife of Cronus; mother of Zeus; identified with Cybele.

**RIVERS OF UNDERWORLD:** Acheron (woe), Cocytus (wailing), Lethe (forgetfulness), Phlegethon (fire), Styx (across which souls of dead were ferried by Charon).

**ROMULUS:** Founder of Rome; he and Remus suckled in infancy by she-wolf; slew Remus; deified by Romans.

**SARPEDON:** King of Lycia; son of Zeus and Europa; slain by Patroclus at Troy.

**SATURN:** *See* Cronus.

**SATYRS:** Hoofed demigods of woods and fields; companions of Dionysus.

**SCIRON:** Robber; forced strangers to wash his feet, then hurled them into sea where tortoise devoured them; slain by Theseus.

**SCYLLA:** Female monster inhabiting rock opposite Charybdis; menaced passing sailors.

**SELENE:** Goddess of moon.

**SEMELE:** Daughter of Cadmus; mother by Zeus of Dionysus; demanded Zeus appear before her in all his splendor and was destroyed by his lightnings.

**SIBYLS:** Various prophetesses; most famous, Cumaean sibyl, accompanied Aeneas into Hades.

**SILENI:** Minor woodland deities similar to satyrs (singular: silenus). Sometime Silenus refers to eldest of satyrs, son of Hermes or of Pan.

**SILVANUS:** Roman god of woods and fields.

**SINIS:** Giant; bent pines, by which he hurled victims against side of mountain slain by Theseus.

**SIRENS:** Minor deities who lured sailors to destruction with their singing.

**SISYPHUS:** King of Corinth; condemned in Tartarus to roll huge stone to top of hill; it always rolled back down again.

**SOL:** *See* Helios.

**SOMNUS:** *See* Hypnos.

**SPHINX:** Monster of Thebes; killed those who could not answer her riddle; slain by Oedipus. Name also refers to other monsters having body of lion, wings, and head and bust of woman.

**STEROPE:** *See* Pleiades.

**STHENO:** *See* Gorgons.

**STYX:** *See* Rivers.

\*What animal goes on 4 feet in morning, 2 at noon, at night? Answer: Man (crawls when child, walks when adult, uses staff when old).

**SYMPLEGADES:** Clashing rocks at entrance to Black Sea; Argo passed through, causing them to become forever fixed.

**SYRINX:** Nymph pursued by Pan; changed to reeds, from which he made his pipes.

**TANTALUS:** Cruel king; father of Pelops and Niobe; condemned in Tartarus to stand chin-deep in lake surrounded by fruit branches; as he tried to eat or drink, water or fruit always receded.

**TARTARUS:** Underworld below Hades; often refers to Hades.

**TAYGETA:** See Pleiades.

**TELEMACHUS:** Son of Odysseus; made unsuccessful journey to find his father.

**TELLUS:** Roman goddess of earth.

**TERMINUS:** Roman god of boundaries and landmarks.

**TERPSICHOE:** See Muses.

**TERRA:** Roman earth goddess.

**THALIA:** See Graces; Muses.

**THANATOS (MORS):** God of death.

**THEMIS:** Titan goddess of laws of physical phenomena; daughter of Uranus; mother of Prometheus.

**THESEUS:** Son of Aegeus; slew Minotaur; married and deserted Ariadne; later married Phaedra.

**THISBE:** Beloved of Pyramus; killed herself at his death.

**THYESTES:** Brother of Atreus; Atreus killed three of his sons and served them to him at banquet.

**TIRESIAS:** Blind soothsayer of Thebes.

**TISIPHONE:** See Furies.

**TITANS:** Early gods from which Olympian gods were derived; children of Uranus and Gaea.

**TITHONUS:** Mortal loved by Eos; changed into grasshopper.

**TRITON:** Demigod of sea; son of Poseidon.

**TURNUS:** King of Rutuli in Italy; betrothed to Lavinia; slain by Aeneas.

**ULYSSES:** See Odysseus.

**URANIA:** See Muses.

**URANUS:** Personification of Heaven; husband of Gaea; father of Titans; dethroned by his son Cronus.

**VENUS:** See Aphrodite.

**VERTUMNUS:** Roman god of fruits and vegetables; husband of Pomona.

**VESTA:** See Hestia.

**VULCAN:** See Hephaestus.

**WINDS:** Aeolus (keeper of winds), Boreas (Aquilo) (north wind), Eurus (east wind), Notus (Auster) (south wind), Zephyrus (Favonius) (west wind).

**ZEPHYRUS:** See Winds.

**ZEUS (JUPITER):** Chief of Olympian gods; son of Cronus and Rhea; husband of Hera.

## Norse Mythology

**AESIR:** Chief gods of Asgard.

**ANDVARI:** Dwarf; robbed of gold and magic ring by Loki.

**ANGERBOTH (Angrbotha):** Giantess; mother by Loki of Fenrir, Hel, and Midgard serpent.

**ASGARD (Asgarth):** Abode of gods.

**ASK (Aske, Ask):** First man; created by Odin, Hoenir, and Lothur.

**ASYNJUR:** Goddesses of Asgard.

**ATLI:** Second husband of Gudrun; invited Gunnar and Hogni to his court, where they were slain; slain by Gudrun.

**AUDHUMLA (Audhumbula):** Cow that nourished Ymir; created Buri by licking ice cliff.

**BALDER (Baldr, Baldur):** God of light, spring, peace, joy; son of Odin; slain by Hoth at instigation of Loki.

**BIFROST:** Rainbow bridge connecting Midgard and Asgard.

**BRAGI (Brage):** God of poetry; husband of Ithunn.

**BRANSTOCK:** Great oak in hall of Volungs; into it, Odin thrust Gram, which only Sigmund could draw forth.

**BRYNHILD:** Valkyrie; wakened from magic sleep by Sigurd; married Gunnar;

instigated death of Sigurd; killed herself and was burned on pyre beside Sigurd.

**BUR (Bor):** Son of Buri; father of Odin, Hoenir, and Lothur.

**BURI (Bori):** Progenitor of gods; father of Bur; created by Audhumla.

**EMBLA:** First woman; created by Odin, Hoenir, and Lothur.

**FAFNIR:** Son of Rodmar, whom he slew for gold in Otter's skin; in form of dragon, guarded gold; slain by Sigurd.

**FENRIR:** Wolf; offspring of Loki; swallows Odin at Ragnarok and is slain by Vitthar.

**FORSETI:** Son of Balder.

**FREY (Freyr):** God of fertility and crops; son of Njorth; originally one of Vanir.

**FREYA (Freyja):** Goddess of love and beauty; sister of Frey; originally one of Vanir.

**FRIGG (Frigga):** Goddess of sky; wife of Odin.

**GARM:** Watchdog of Hel; slays, and is slain by, Tyr at Ragnarok.

**GIMLE:** Home of blessed after Ragnarok.

**GIUKI:** King of Nibelungs; father of Gunnar, Hogni, Guttorm, and Gudrun.

**GLATHSHEIM** (Gladshelm): Hall of gods in Asgard.

**GRAM** (meaning "Angry"): Sigmund's sword; rewedded by Regin; used by Sigurd to slay Fafnir.

**GREYFELL**: Sigmund's horse; descended from Sleipnir.

**GRIMHILD**: Mother of Gudrun; administered magic potion to Sigurd which made him forget Brynhild.

**GUDRUN**: Daughter of Giuki; wife of Sigurd; later wife of Atli and Jonakr.

**GUNNAR**: Son of Giuki; in his semblance Sigurd won Brynhild for him; slain at hall of Atli.

**GUTTORM**: Son of Giuki; slew Sigurd at Brynhild's request.

**HEIMDALL** (Heimdallr): Guardian of Asgard.

**HEL**: Goddess of dead and queen of underworld; daughter of Loki.

**HIORDIS**: Wife of Sigmund; mother of Sigurd.

**HOENIR**: One of creators of Ask and Embla; son of Bur.

**HOGNI**: Son of Giuki; slain at hall of Atli.

**HOTH** (Hoder, Hodur): Blind god of night and darkness; slayer of Balder at instigation of Loki.

**ITHUNN** (Ithun, Iduna): Keeper of golden apples of youth; wife of Bragi.

**JONAKR**: Third husband of Gudrun.

**JORMUNREK**: Slayer of Swanhild; slain by sons of Gudrun.

**JOTUNNHEIM** (Jotunheim): Abode of giants.

**LIF** and **LIFTHRASIR**: First man and woman after Ragnarok.

**LOKI**: God of evil and mischief; instigator of Balder's death.

**LOTHUR** (Lodur): One of creators of Ask and Embla.

**MIDGARD** (Midgarth): Abode of mankind; the earth.

**MIDGARD SERPENT**: Sea monster; offspring of Loki; slays, and is slain by, Thor at Ragnarok.

**MIMIR**: Giant; guardian of well in Jotunheim at root of Yggdrasill; knower of past and future.

**MJOLLNIR**: Magic hammer of Thor.

**NAGLFAR**: Ship to be used by giants in attacking Asgard at Ragnarok; built from nails of dead men.

**NANNA**: Wife of Balder.

**NIBELUNGS**: Dwellers in northern kingdom ruled by Giuki.

**NIFLHEIM** (Nifelheim): Outer region of cold and darkness; abode of Hel.

**NJORTH**: Father of Frey and Freya; originally one of Vanir.

**NORNS**: Demigoddesses of fate: Urd (Urdur) (Past), Verthandi (Verdand: Present), Skuld (Future).

**ODIN** (Othin): Head of Aesir; creator of world with Vili and Ve; equivalent to Woden (Wodan, Wotan) in Teutonic mythology.

**OTTER**: Son of Rodmar; slain by Lok; his skin filled with gold hoard of Andvari; appease Rodmar.

**RAGNAROK**: Final destruction of present world in battle between gods and giants; some minor gods will survive, and Lif and Lifthrasir will repeople world.

**REGIN**: Blacksmith; son of Rodmar; foster-father of Sigurd.

**RERIR**: King of Huns; son of Sigi.

**RODMAR**: Father of Regin, Otter, and Fafnir; demanded Otter's skin be filled with gold; slain by Fafnir, who stole gold.

**SIF**: Wife of Thor.

**SIGGEIR**: King of Goths; husband of Signy; he and his sons slew Volsung and his sons, except Sigmund; slain by Sigmund and Sinfliotli.

**SIGI**: King of Huns; son of Odin.

**SIGMUND**: Son of Volsung; brother of Signy, who bore him Sinfliotli; husband of Hiordis, who bore him Sigurd.

**SIGNY**: Daughter of Volsung; sister of Sigmund; wife of Siggeir; mother by Sigmund of Sinfliotli.

**SIGURD**: Son of Sigmund and Hiordis; awakened Brynhild from magic sleep; married Gudrun; slain by Guttorm at instigation of Brynhild.

**SIGYN**: Wife of Loki.

**SINFLOTI**: Son of Sigmund and Signy.

**SKULD**: See Norns.

**SLEIPNIR** (Sleipner): Eight-legged horse of Odin.

**SURT** (Surtr): Fire demon; slays Frey at Ragnarok.

**SVARTALFAHEIM**: Abode of dwarfs.

**SWANHILD**: Daughter of Sigurd and Gudrun; slain by Jormunrek.

**THOR**: God of thunder; oldest son of Odin; equivalent to Germanic deity Donar.

**TYR**: God of war; son of Odin; equivalent to Ti in Teutonic mythology.

**ULL** (Ullr): Son of Sif; stepson of Thor.

**URTH**: See Norns.

**VALHALLA** (Valhall): Great hall in Asgard where Odin received souls of heroes killed in battle.

**VALI**: Odin's son; Ragnarok survivor.

**VALKYRIES**: Virgins, messengers of Odin, who selected heroes to die in battle and took them to Valhalla; generally considered as nine in number.

**VANIR**: Early race of gods; three survivors, Njorth, Frey, and Freya, are associated with Aesir.



VE: Brother of Odin; one of creators of world.

VERTHANDI: See Norns.

VILI: Brother of Odin; one of creators of world.

VINGOLF: Abode of goddesses in Asgard.

VITHARR (Vithar): Son of Odin; survivor of Ragnarok.

VOLSUNG: King of Huns; son of Rerir;

father of Signy, Sigmund, etc.; his descendants were called Volsungs.

YGGDRASIL: Giant ash tree springing from body of Ymir and supporting universe; its roots extended to Asgard, Jotunnheim, and Nifheim.

YMR (Ymer): Primeval frost giant killed by Odin, Vili, and Ve; world created from his body; also, from his body sprang Yggdrasil.

## Egyptian Mythology

AARU: Abode of the blessed dead.

AMEN (Amon, Ammon): One of chief Theban deities; united with sun god under form of Amen-Ra.

AMENTI: Region of dead where souls were judged by Osiris.

ANUBIS: Guide of souls to Amenti; son of Osiris; jackal-headed.

APIS: Sacred bull, an embodiment of Ptah; identified with Osiris as Osiris-Apis or Serapis.

GEB (Keb, Seb): Earth god; father of Osiris; represented with goose on head.

HATHOR (Athor): Goddess of love and mirth; cow-headed.

HORUS: God of day; son of Osiris and Isis; hawk-headed.

ISIS: Goddess of motherhood and fertility; sister and wife of Osiris.

KHEPERA: God of morning sun.

KHNEMU (Khnum, Chnuphis, Chnemu, Chnum): Ram-headed god.

KHONSU (Khensu, Khuns): Son of Amen and Mut.

MENTU (Ment): Solar deity, sometimes considered god of war; falcon-headed.

MIN (Khem, Chem): Principle of physical life.

MUT (Maut): Wife of Amen.

NEPHTHYS: Goddess of the dead; sister and wife of Set.

NU: Chaos from which world was created, personified as a god.

NUT: Goddess of heavens; consort of Geb.

OSIRIS: God of underworld and judge of dead; son of Geb and Nut.

PTAH (Phtha): Chief deity of Memphis.

RA: God of the Sun, the supreme god; son of Nut; Pharaohs claimed descent from him; represented as lion, cat, or falcon.

SERAPIS: God uniting attributes of Osiris and Apis.

SET (Seth): God of darkness or evil; brother and enemy of Osiris.

SHU: Solar deity; son of Ra and Hathor.

TEM (Atmu, Atum, Tum): Solar deity.

THOTH (Dhouti): God of wisdom and magic; scribe of gods; ibis-headed.

## Rulers of England and Great Britain

Saxons <sup>1</sup>			
Name	Born	Ruled <sup>2</sup>	
Egbert <sup>3</sup> .....	c. 775	828-839	
Ethelwulf .....	?	839-858	
Ethelbald .....	?	858-860	
Ethelbert .....	?	860-866	
Ethelred I .....	?	866-871	
Alfred the Great .....	849	871-899	
Edward the Elder .....	c. 870	899-925	
Athelstan .....	895	925-939	
Edmund I the Deed-doer ..	921	939-946	
Edred .....	c. 925	946-955	
Edwy the Fair .....	c. 943	955-959	
Edgar the Peaceful .....	943	959-975	
Edward the Martyr .....	c. 962	975-979	
Ethelred II the Unready ..	868	979-1016	
Edmund II Ironside .....	c. 993	1016-1016	
Danes			
Canute .....	995	1016-1035	
Harold I Harefoot .....	c. 1016	1035-1040	
Hardecnute .....	c. 1018	1040-1042	
Saxons			
Edward the Confessor .....	c. 1004	1042-1066	
Harold II .....	c. 1020	1066-1066	

House of Normandy			
Name	Born	Ruled <sup>2</sup>	
William I the Conqueror ..	1027	1066-1087	
William II Rufus .....	c. 1056	1087-1100	
Henry I Beaclerc .....	1068	1100-1135	
Stephen of Blois .....	c. 1100	1135-1154	
House of Plantagenet			
Henry II .....	1133	1154-1189	
Richard I Coeur de Lion ..	1157	1189-1199	
John Lackland .....	1167	1199-1216	
Henry III .....	1207	1216-1272	
Edward I Longshanks .....	1239	1272-1307	
Edward II .....	1284	1307-1327	
Edward III .....	1312	1327-1377	
Richard II .....	1367	1377-1399 <sup>4</sup>	
House of Lancaster			
Henry IV Bolingbroke .....	1366	1399-1413	
Henry V .....	1387	1413-1422	
Henry VI .....	1421	1422-1461 <sup>13</sup>	
House of York			
Edward IV .....	1442	1461-1483 <sup>13</sup>	
Edward V .....	1470	1483-1483	
Richard III .....	1452	1483-1485	

## House of Tudor

Name	Born	Ruled <sup>1</sup>
Henry VII .....	1457	1485-1509
Henry VIII .....	1491	1509-1547
Edward VI .....	1537	1547-1553
Jane (Lady Jane Grey) <sup>2</sup> ..	1537	1553-1553
Mary I ("Bloody Mary") ..	1516	1553-1558
Elizabeth I .....	1533	1558-1603

## House of Stuart

James I <sup>3</sup> .....	1566	1603-1625
Charles I .....	1600	1625-1649

## Commonwealth

Council of State .....	1649-1653
Oliver Cromwell <sup>7</sup> .....	1599 1653-1658
Richard Cromwell <sup>7</sup> .....	1626 1658-1659 <sup>8</sup>

## Restoration of House of Stuart

Charles II .....	1630	1660-1685
James II .....	1633	1685-1688 <sup>9</sup>

<sup>1</sup> Dates for Saxon Kings are still subjects of controversy. <sup>2</sup> Year of end of rule is also that of death, unless otherwise indicated. <sup>3</sup> Became King of West Saxons in 802; considered (from 828) first King of all England. <sup>4</sup> Died 1490. <sup>5</sup> Nominal Queen for 9 days; not counted as Queen by some authorities. She was beheaded in 1554.

## Restoration of House of Stuart (cont'd)

Name	Born	Ruled <sup>2</sup>
William III <sup>10</sup> .....	1650	1689-1702
Mary II <sup>10</sup> .....	1662	1689-1694
Anne .....	1665	1702-1714

## House of Hanover

George I .....	1660	1714-1727
George II .....	1683	1727-1760
George III .....	1738	1760-1820
George IV .....	1762	1820-1830
William IV .....	1765	1830-1837
Victoria .....	1819	1837-1901

House of Saxe-Coburg<sup>11</sup>

Edward VII .....	1841	1901-1910
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House of Windsor<sup>11</sup>

George V .....	1865	1910-1936
Edward VIII .....	1894	1936-1936 <sup>12</sup>
George VI .....	1895	1936-1952
Elizabeth II .....	1926	1952-

<sup>6</sup> Ruled in Scotland as James VI (1567-1625). <sup>7</sup> Lord Protector. <sup>8</sup> Died 1712. <sup>9</sup> Died 1701. <sup>10</sup> Joint ruler 1689-1694. <sup>11</sup> Names changed from Saxe-Coburg to Windsor in 1917. <sup>12</sup> Has been known since his abdication as the Duke of Windsor. <sup>13</sup> Henry VI reigned again briefly 1470-71.

## British Prime Ministers Since 1770

Name	Term	Name	Term
Lord North (Tory) .....	1770-1782	Marquis of Salisbury	
Marquis of Rockingham (Whig) ..	1782-1782	(Conservative) .....	1885-1886
Earl of Shelburne (Whig) .....	1782-1783	William E. Gladstone (Liberal) ..	1868-1886
Duke of Portland (Coalition) .....	1783-1783	Marquis of Salisbury	
William Pitt, the Younger (Tory) ..	1783-1801	(Conservative) .....	1886-1895
Henry Addington (Tory) .....	1801-1804	William E. Gladstone (Liberal) ..	1892-1895
William Pitt, the Younger (Tory) ..	1804-1806	Earl of Rosebery (Liberal) .....	1894-1895
Baron Grenville (Whig) .....	1806-1807	Marquis of Salisbury	
Duke of Portland (Tory) .....	1807-1809	(Conservative) .....	1895-1902
Spencer Perceval (Tory) .....	1809-1812	Earl Balfour (Conservative) .....	1902-1905
Earl of Liverpool (Tory) .....	1812-1827	Sir H. Campbell-Bannerman	
George Canning (Tory) .....	1827-1827	(Liberal) .....	1905-1908
Viscount Goderich (Tory) .....	1827-1828	Herbert H. Asquith (Liberal) ....	1908-1911
Duke of Wellington (Tory) .....	1828-1830	Herbert H. Asquith (Coalition) ..	1915-1916
Earl Grey (Whig) .....	1830-1834	David Lloyd George (Coalition) ..	1916-1922
Viscount Melbourne (Whig) .....	1834-1834	Andrew Bonar Law (Conservative) ..	1922-1923
Sir Robert Peel (Tory) .....	1834-1835	Stanley Baldwin (Conservative) ..	1923-1929
Viscount Melbourne (Whig) .....	1835-1841	James Ramsay MacDonald	
Sir Robert Peel (Tory) .....	1841-1846	(Labour) .....	1924-1929
Earl Russell (Whig) .....	1846-1852	Stanley Baldwin (Conservative) ..	1924-1929
Earl of Derby (Tory) .....	1852-1852	James Ramsay MacDonald	
Earl of Aberdeen (Coalition) .....	1852-1855	(Labour) .....	1929-1931
Viscount Palmerston (Liberal) .....	1855-1858	James Ramsay MacDonald	
Earl of Derby (Conservative) .....	1858-1859	(Coalition) .....	1931-1935
Viscount Palmerston (Liberal) .....	1859-1865	Stanley Baldwin (Coalition) .....	1935-1939
Earl Russell (Liberal) .....	1865-1866	Neville Chamberlain (Coalition) ..	1937-1940
Earl of Derby (Conservative) .....	1866-1868	Winston Churchill (Coalition) .....	1940-1945
Benjamin Disraeli (Conservative) ..	1868-1868	Clement R. Attlee (Labour) .....	1945-1951
William E. Gladstone (Liberal) .....	1868-1874	Sir Winston Churchill	
Benjamin Disraeli (Conservative) ..	1874-1880	(Conservative) .....	1951-1955
William E. Gladstone (Liberal) .....	1880-1885	Sir Anthony Eden (Conservative) ..	1955-

## Birthstones

Source: Jewelry Industry Council.

January .....	Garnet	July .....	Rub
February .....	Amethyst	August .....	Peridot or Sardony
March .....	Aquamarine or Bloodstone	September .....	Sapphir
April .....	Diamond	October .....	Opal or Tourmalin
May .....	Emerald	November .....	Topa
June .....	Pearl, Alexandrite or Moonstone	December .....	Turquoise or Zirco

## Rulers of France

Carolingian Dynasty			
Name	Born	Ruled <sup>1</sup>	
Peppin the Short	c. 714	751-768	
Charlemagne <sup>2</sup>	742	768-814	
Louis I the Debonair <sup>3</sup>	778	814-840	
Charles I the Bald <sup>4</sup>	823	840-877	
Louis II the Stammerer	846	877-879	
Louis III <sup>5</sup>	c. 863	879-882	
Carloman <sup>6</sup>	?	879-884	
Charles II the Fat <sup>6</sup>	839	884-887 <sup>7</sup>	
Eudes (Odo), Count of Paris	?	888-898	
Charles III the Simple <sup>8</sup>	879	893-923 <sup>9</sup>	
Robert I <sup>10</sup>	c. 865	922-923	
Rudolf (Raoul), Duke of Burgundy	?	926-936	
Louis IV d'Outremer	c. 921	936-954	
Lothair	941	954-986	
Louis V the Sluggard	c. 966	986-987	

Capetian Dynasty			
Hugh Capet	c. 940	987-996	
Robert II the Pious <sup>11</sup>	c. 970	996-1031	
Henry I	1008	1031-1060	
Philip I	1052	1060-1108	
Louis VI the Fat	1081	1108-1137	
Louis VII the Young	c. 1121	1137-1180	
Philip II (Philip Augustus)	1165	1180-1223	
Louis VIII the Lion	1187	1223-1226	
Louis IX (St. Louis)	1214	1226-1270	
Philip III the Bold	1245	1270-1285	
Philip IV the Fair	1268	1285-1314	
Louis X the Quarreler	1289	1314-1316	
John I	1316	1316-1316	
Philip V the Tall	1294	1316-1322	
Charles IV the Fair	1294	1322-1328	

House of Valois			
Philip VI	1293	1328-1350	
John II the Good	1319	1350-1364	
Charles V the Wise	1337	1364-1380	
Charles VI the Well-Beloved	1368	1380-1422	
Charles VII	1403	1422-1461	
Louis XI	1423	1461-1483	
Charles VIII	1470	1483-1498	
Louis XII the Father of the People	1462	1498-1515	
Francis I	1494	1515-1547	
Henry II	1519	1547-1559	
Francis II	1544	1559-1560	
Charles IX	1550	1560-1574	
Henry III	1551	1574-1589	

House of Bourbon			
Henry IV of Navarre	1553	1589-1610	
Louis XIII	1601	1610-1643	
Louis XIV the Great	1638	1643-1715	
Louis XV the Well-Beloved	1710	1715-1774	

House of Bourbon (cont'd)			
Name	Born	Ruled <sup>1</sup>	
Louis XVI	1754	1774-1792 <sup>12</sup>	
Louis XVII (Louis Charles de France) <sup>13</sup>	1785	1793-1795	

## First Republic

National Convention	1792-1795		
Directory (Directoire)	1795-1799		

## Consulate

Napoleon Bonaparte <sup>14</sup>	1769	1799-1804	
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## First Empire

Napoleon I	1769	1804-1815 <sup>15</sup>	
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## Restoration of House of Bourbon

Louis XVIII le Désiré	1755	1814-1824	
Charles X	1757	1824-1830 <sup>16</sup>	

## Bourbon-Orleans line

Louis Philippe ("Citizen King")	1773	1830-1848 <sup>17</sup>	
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## Second Republic

Louis Napoleon <sup>18</sup>	1808	1848-1852	
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## Second Empire

Napoleon III (Louis Napoleon)	1808	1852-1871 <sup>19</sup>	
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## Third Republic

Louis Adolphe Thiers <sup>20</sup>	1797	1871-1873 <sup>21</sup>	
Marie E. P. M. de MacMahon <sup>20</sup>	1808	1873-1879 <sup>22</sup>	
François P. J. Grévy <sup>20</sup>	1807	1879-1887 <sup>23</sup>	
Sadi Carnot <sup>20</sup>	1837	1887-1894	
Jean Casimir-Périer <sup>20</sup>	1847	1894-1895 <sup>24</sup>	
François Félix Faure <sup>20</sup>	1841	1895-1899	
Émile Loubet <sup>20</sup>	1838	1899-1906 <sup>25</sup>	
Clement Armand Fallières <sup>20</sup>	1841	1906-1913 <sup>26</sup>	
Raymond Poincaré <sup>20</sup>	1860	1913-1920 <sup>27</sup>	
Paul E. L. Deschanel <sup>20</sup>	1856	1920-1920 <sup>28</sup>	
Alexandre Millerand <sup>20</sup>	1859	1920-1924 <sup>29</sup>	
Gaston Doumergue <sup>20</sup>	1863	1924-1931 <sup>30</sup>	
Paul Doumer <sup>20</sup>	1857	1931-1932	
Albert Lebrun <sup>20</sup>	1871	1932-1940 <sup>31</sup>	

## Vichy Government

Henri Philippe Pétain <sup>32</sup>	1856	1940-1944 <sup>33</sup>	
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## Provisional Government

Charles de Gaulle <sup>34</sup>	1890	1944-1946 <sup>35</sup>	
Félix Gouin <sup>34</sup>	1884	1946-1946 <sup>36</sup>	
Georges Bidault <sup>34</sup>	1899	1946-1947 <sup>37</sup>	

## Fourth Republic

Vincent Auriol <sup>30</sup>	1884	1947-1954 <sup>38</sup>	
René Coty <sup>20</sup>	1882	1954-	

<sup>1</sup> Year of end of rule is also that of death, unless otherwise indicated. <sup>2</sup> Crowned Emperor of the West in 800. <sup>3</sup> Holy Roman Emperor 814-840. <sup>4</sup> Holy Roman Emperor 875-877 as Charles II. <sup>5</sup> Ruled jointly 879-882. <sup>6</sup> Holy Roman Emperor 881-887 as Charles III. <sup>7</sup> Died 888. <sup>8</sup> King 893-898 in opposition to Eudes. <sup>9</sup> Died 929. <sup>10</sup> Not counted in regular line of Kings of France by some authorities. Elected by nobles but killed in Battle of Bossons. <sup>11</sup> Sometimes called Robert I. <sup>12</sup> Executed 1793. <sup>13</sup> Titular King only. He died in prison according to official reports, but many pretenders appeared during the Bourbon restoration. <sup>14</sup> As First Consul, Napoleon

held the power of government. In 1804, he became Emperor. <sup>15</sup> Abdicated first time June 1814. Re-entered Paris Mar. 1815, after escape from Elba; Louis XVIII fled to Ghent. Abdicated second time June 1815. He named as his successor his son, Napoleon II, who was not acceptable to the Allies. He died 1821. <sup>16</sup> Died 1836. <sup>17</sup> Died 1850. <sup>18</sup> President; became Emperor in 1852. <sup>19</sup> Died 1873. <sup>20</sup> President. <sup>21</sup> Died 1877. <sup>22</sup> Died 1893. <sup>23</sup> Died 1891. <sup>24</sup> Died 1907. <sup>25</sup> Died 1929. <sup>26</sup> Died 1931. <sup>27</sup> Died 1934. <sup>28</sup> Died 1922. <sup>29</sup> Died 1942. <sup>30</sup> Died 1937. <sup>31</sup> Died 1950. <sup>32</sup> Chief of State. <sup>33</sup> Died 1951. <sup>34</sup> Interim President. <sup>35</sup> Still alive.



## Rulers of Germany and Prussia

### Kings of Prussia

Name	Born	Ruled <sup>1</sup>
Frederick I <sup>2</sup> .....	1657	1701-1713
Frederick William I .....	1688	1713-1740
Frederick II the Great .....	1712	1740-1786
Frederick William II .....	1744	1786-1797
Frederick William III .....	1770	1797-1840
Frederick William IV .....	1795	1840-1861
William I .....	1797	1861-1871 <sup>3</sup>

### Emperors of Germany

William I .....	1797	1871-1888
Frederick III .....	1831	1888-1888
William II .....	1859	1888-1918 <sup>4</sup>

<sup>1</sup> Year of end of rule is also that of death, unless otherwise indicated. <sup>2</sup> Was Elector of Brandenburg (1688-1701) as Frederick III. <sup>3</sup> Became Emperor of Germany

### Heads of the Reich

Name	Born	Ruled <sup>1</sup>
Friedrich Ebert <sup>5</sup> .....	1871	1919-1925
Paul von Hindenburg <sup>6</sup> .....	1847	1925-1934
Adolf Hitler <sup>6,7</sup> .....	1889	1934-1945
Karl Doenitz <sup>8</sup> .....	1891	1945-1945 <sup>8</sup>

### Federal Republic of Germany (Western)

Theodor Heuss <sup>5</sup> .....	1884	1949-
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### Democratic Republic Government (Eastern)

Wilhelm Pieck <sup>5</sup> .....	1876	1949-
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in 1871. <sup>4</sup> Died 1941. <sup>5</sup> President. <sup>6</sup> Führer. <sup>7</sup> Named Chancellor by President Hindenburg in 1933. <sup>8</sup> Still alive.

## Rulers of Russia Since 1533

Name	Born	Ruled <sup>1</sup>
Ivan IV the Terrible .....	1530	1533-1584
Theodore I .....	1557	1584-1598
Boris Godunov .....	c.1551	1598-1605
Theodore II .....	1589	1605-1605
Demetrius I <sup>2</sup> .....	?	1605-1606
Basil IV Shuiski .....	?	1606-1610 <sup>3</sup>
"Time of Troubles" .....		1610-1613
Michael Romanov .....	1596	1613-1645
Alexis I .....	1629	1645-1676
Theodore III .....	1656	1676-1682
Ivan V <sup>4</sup> .....	1666	1682-1689 <sup>5</sup>
Peter I the Great <sup>4</sup> .....	1672	1682-1725
Catherine I .....	c.1684	1725-1727
Peter II .....	1715	1727-1730
Anna .....	1693	1730-1740
Ivan VI .....	1740	1740-1741 <sup>6</sup>
Elizabeth .....	1709	1741-1762
Peter III .....	1728	1762-1762

<sup>1</sup> Year of end of rule is also that of death, unless otherwise indicated. <sup>2</sup> Also known as Pseudo-Demetrius. <sup>3</sup> Died 1612. <sup>4</sup> Ruled jointly until 1689, when Ivan was

Name	Born	Ruled <sup>1</sup>
Catherine II the Great ....	1729	1762-1796
Paul I .....	1754	1796-1801
Alexander I .....	1777	1801-1825
Nicholas I .....	1796	1825-1855
Alexander II .....	1818	1855-1881
Alexander III .....	1845	1881-1894
Nicholas II .....	1868	1894-1917 <sup>7</sup>

### Provisional Government

Prince Georgi Lvov <sup>8</sup> .....	1861	1917-1917 <sup>9</sup>
Alexander Kerensky <sup>8</sup> .....	1881	1917-1917 <sup>10</sup>

### U.S.S.R.

Nikolai Lenin <sup>8</sup> .....	1870	1917-1924
Joseph Stalin <sup>11</sup> .....	1879	1924-1953
Georgi M. Malenkov <sup>8</sup> .....	1902	1953-1955 <sup>12</sup>
Nikolai A. Bulganin <sup>8</sup> .....	1895	1955-

deposed. <sup>8</sup> Died 1696. <sup>9</sup> Died 1764. <sup>7</sup> Killed 1918. <sup>10</sup> Premier. <sup>11</sup> Died 1925. <sup>12</sup> Still alive. <sup>13</sup> General Secretary of Communist party; Premier 1941-53.

## Animal Names: Male, Female and Young

Source: Grace Davall, N.Y. Zoological Society.

Animal	Male	Female	Young	Animal	Male	Female	Young
Ass	Jack	Jenny	Colt	Horse	Stallion	Mare	Foal
Bear	He-bear	She-bear	Cub	Lion	Lion	Lioness	Cub
Cat	Tom	Tabby	Kitten	Rabbit	Buck	Doe	.....
Cattle	Bull	Cow	Calf	Sheep	Ram	Ewe	Lamb
Chicken	Rooster	Hen	Chick	Swan	Cob	Pen	Cygnets
Deer	Buck	Doe	Fawn	Swine	Boar	Sow	Shoat or piglet
Dog	Dog	Bitch	Pup	Tiger	Tiger	Tigress	Cub
Duck	Drake	Duck	Duckling	Whale	Bull	Cow	Calf
Elephant	Bull	Cow	Calf	Wolf	Dog	Bitch	Cub, pup or whelp
Fox	Dog	Vixen	Cub				
Goose	Gander	Goose	Gosling				

## Mason and Dixon's Line

Mason and Dixon's Line (often called the Mason-Dixon Line) is the boundary between Pennsylvania and Maryland, running at a north latitude of 39°43'19.11". The greater part of it was surveyed from 1763-67 by Charles Mason and Jeremiah

Dixon, English astronomers who had been appointed to settle a dispute between the colonies. As the line was partly the boundary between the free and the slave states it has come to signify the division between the North and the South.

# WORD SECTION

New and Newly Important Words and Meanings  
Words Frequently Misspelled . . . Forms of Address

*Prepared by*

G. & C. MERRIAM CO., Springfield, Mass.

Publishers of

Webster's New International Dictionary, Second Edition  
Webster's New Collegiate Dictionary

## New and Newly Important Words and Meanings

*Note:* This is a selected list of words, from a wide variety of subject areas, that have become of fairly recent general interest. Many, as *radar*, *colorcast*, and *dynel*, are new in the sense that they were recently introduced into the language. Some, as *omnibus*, *libretto*, and *alligator*, are recently acquired new or extended senses of well-established terms. Others, as *rocket ship*, *snollygoster* and *fission*, are terms that have been in limited use within certain circles for a considerable time but have only recently become generally used and known. It would be out of keeping with the spirit of a list like this and beyond the space available to treat the entries in formal dictionary fashion. In general, only the commonest spellings and the most basic and important of the new senses have been given.

**ABSTRACT:** Characterized by designs in which an artist, using lines or blocks of color rather than pictures of actual objects, attempts to set forth his feelings or ideas.

**ACETATE RAYON:** A rayon fiber made with cellulose acetate.

**ACK-ACK:** An anti-aircraft gun; also, the fire of such a gun.

**ACRONYM:** A word formed from the initial letters or the first and last syllables of the words in a compound (*jato* from *jet* assisted take-off; *motel* from *motorists' hotel*).

**ACTH:** A compound obtained from the pituitary gland, used especially in the treatment of arthritis.

**ACTINOMYCIN:** An antibiotic isolated from certain soil bacteria.

**ADDITIVE:** Any substance which, when added to another product, such as gasoline or a storage battery, is supposed to make it more powerful or longer-lasting.

**AEROEMBOLISM:** An abnormal bodily condition, called also *air bends*, due to the formation of nitrogen bubbles in the blood and spinal fluid brought about by rapid ascent into high altitudes.

**AGITPROP:** Serving as a means for spreading propaganda intended to promote militancy among the common people;—applied originally to pro-Communist activities.

**AIRLIFT:** A supply line operated by aircraft.

**AIRSTRIPE:** A hard-surfaced runway for the take-off and landing of aircraft; also, a portable runway made of steel sheets.

**ALCOMETER:** A device for detecting drunkenness by measuring the amount of alcohol in a sample of exhaled air.

**ALERT:** A signal to warn of danger, as from hostile aircraft; also, the period of time in which the signal is in effect.

**ALLIGATOR:** A flat-bottomed, armored military vehicle for use on land or water.

**ALL-OUT:** Making use of all available power and resources (as, an *all-out* effort).

**AMPLITUDE MODULATION** or **AM:** A system of radio broadcasting in which the amplitude of the carrier wave is modulated in accordance with the form of the sound or signal wave.

**AMTRAC:** An amphibious tractor, used chiefly as a military vehicle.

**ANGLE:** A special approach or technique for achieving an end, as for writing a news story or promoting an interest.

**ANTIBIOTIC:** A substance produced by a living organism, especially by a bacterium or fungus, that is used to kill or stop the growth of disease germs.

**ANTIHISTAMINE:** An agent used in the prevention or treatment of allergic reactions.

**AQUACADE:** An elaborate water show consisting of exhibitions of swimming, diving, and acrobatics, accompanied by music.

**ARENA THEATER** = **THEATRE-IN-THE-ROUND**.

**ARTIFICIAL INSEMINATION:** Introduction of semen into the genital tract of a female animal by other than the natural means.

**ASTRODOME:** A transparent dome on the upper surface of an airplane from which the navigator makes celestial observations.

**ATEBRIN:** An antimalarial drug, quinacrine dihydrochloride.

**ATOMIC BOMB, ATOM BOMB, or A-BOMB:** A bomb with violent explosive power that is due to a sudden release of atomic energy.

**ATOMIC COCKTAIL:** A radioactive substance such as sodium iodide, dissolved in water and given as a drink to cancer patients.

**AUDIO:** Pertaining to or used in the transmission or reception of sound in TV.

- AUDIOPHILE:** One who is enthusiastic about sound, especially music from high-fidelity broadcasts or recordings.
- AUDIOVISUAL:** Involving both hearing and seeing (as, *audiovisual* education uses films, slides, phonograph records, and the like, to supplement instruction).
- AUREOMYCIN:** An antibiotic isolated from a soil microorganism.
- AUSTERITY:** A severe or enforced economy characterized by a lack of luxuries (as, postwar *austerity* in Great Britain).
- AUTOMATIC TRANSMISSION:** Automotive transmission in which the gears are shifted automatically.
- AUTOMATION:** The substitution of machines or mechanical devices for human beings in a manufacturing process.
- BABUSHKA:** A triangular kerchief worn over the head and tied under the chin.
- BABY SITTER:** One who is hired, usually for a few hours, to care for children while the parents are absent from the home.
- BALL-POINT PEN:** A fountain pen in which the writing point is a tiny ball that rotates freely against an inking magazine.
- BAMBOO CURTAIN:** The military, political, and propaganda barrier isolating territory controlled by the Chinese Communists.
- BANK:** A place for storing a reserve supply;—occurs in such combinations as *blood bank*, *eye bank*, *bone bank*, *skin bank*.
- BANKROLLER:** One having a sizable bankroll or a ready and ample supply of funds.
- BARBITURATE:** One of a large group of drugs often used as sedatives or antispasmodics.
- BARREL:** To move at a high speed in a straight course;—used especially of vehicles.
- BASIC ENGLISH:** A copyrighted system intended to simplify the learning of English by the use of a vocabulary limited to the 850 most essential words.
- BATHYTHERMOGRAPH:** An instrument for recording the temperature variations of sea or fresh water according to depth.
- BAZOOKA:** A portable rocket-launcher, used chiefly as an antitank weapon.
- BEACHHEAD:** An area on an enemy shore which an advance force occupies and defends.
- BEAM:** A directional radio signal for guiding aircraft, audible as a continuous tone as long as the aircraft stays on course, but as a broken tone if it veers to the left or right.
- BEBOB:** A style of jazz with many notes to the measure, usually played loud and fast and characterized by changing of key and accenting of odd beats.
- BELLYLAND:** To land an airplane on the under side of its fuselage without using the landing gear.
- BENTHOSCOPE:** A steel sphere used for deep-sea diving and observation.
- BETATRON:** An apparatus in which electrons are accelerated to high speed and formed into beta rays for use in generating high-voltage X-rays or for nuclear bombardment.
- BIG WHEEL, slang:** An important, impressive person; sometimes one who only feels himself important.
- BIKINI:** A woman's two-piece bathing suit of abbreviated style.
- BINAURAL SOUND:** Sound recorded or transmitted by pairs of equipment in order to give the listener the effect of having heard the original with his own two ears.
- BIOLOGICAL WARFARE:** Warfare in which living organisms, especially disease germs, are used against human, animal, and plant life; also, warfare involving the use of synthetic chemicals against plants.
- BIRD, slang:** An enthusiast (as, a *bird* about music); also, any person thought to be odd or strange.
- BITCH, slang:** To gripe; to complain.
- BLACK MARKET:** Trade in violation of official controls or restrictions, especially those concerning price ceilings, rationing, and priorities; also, a market or group carrying on such trade.
- BLISTER:** A compartment, often covered by a transparent dome, that protrudes from the fuselage of an aircraft and is usually occupied by a gunner or observer.
- BLITZ:** A violent, swift military attack; also, any sudden, overpowering attack;—short for *blitzkrieg*.
- BLOCKBUSTER:** A huge, high-explosive demolition bomb, usually one weighing two, four, or six tons.
- BLOODMOBILE:** An automobile equipped for collecting blood from volunteer donors.
- BLUEPRINT:** A detailed plan for a project or program of action (as, a *blueprint* for mobilization).
- BLUE RIBBON JURY:** A panel of jurors selected for qualifications such as education or property ownership, that may be called to sit in complicated cases.
- BOBBY SOCK:** A girl's sock reaching above the ankle.
- BOBBY SOXER:** A young girl, especially one in the early teens;—from the wearing of bobby socks.
- BOMB:** A small container in which a liquid, as an insecticide, is held under pressure and released as a spray.
- BOOBY TRAP:** An explosive device concealed and attached to some harmless-looking object; also, any trap for the unsuspecting.
- BOOGIE-WOOGIE:** A style of playing blues on the piano, characterized by a persistent bass rhythm and elaborate treatments of a simple melody, often in contrary motion to the bass.
- BOOKBURNING:** Systematic destruction, usually by a government, of books believed to contain dangerous ideas; hence, the suppression of ideas.
- BOOKMOBILE:** A closed autotruck with shelves of books, which serves as a traveling library or bookstore.
- BOOSTER:** A device for strengthening radio or television signals in areas where the reception is weak.
- BOP:** Short for *bebop*; also, one fond of *bebop*.
- BOTTLENECK:** To delay progress; to hold up a process, especially at a critical point.
- BOYS' TOWN:** A farm or school for homeless or delinquent boys, organized like a town and governed by the boys themselves.



**BRAINWASHING:** The forcible replacement of one set of political ideas by another set, especially through indoctrination or mental torture.

**BRASS:** Military and naval officers of high rank or position, especially those in top commands.

**BREAK:** A short rest period, often one set aside from the working day.

**BRIEF:** To give final, last-minute instructions or information (as, to *brief* the crew of a bomber before a mission).

**BROWNOUT:** A dimming of street lights and various other outdoor lighting, chiefly to conserve fuel supplies.

**BRUSHOFF:** A curt or offhand dismissal (as, to give someone the *brushoff*).

**BUDGIE:** For *budgerig*, the zebra parakeet.

**BUILD-UP:** Extremely favorable notice, as by the press or radio, designed to popularize a product, personality, or organization.

**BUILT-IN:** Functioning as a part of, but separately identifiable from, a given unit (as, *built-in* shelves); also, conditioned (as, a *built-in* reaction).

**BULLDOZER:** A tractor-driven machine with a broad, blunt horizontal blade or ram, used especially in road building and clearing land.

**BUMP:** To push (a person) out of his place in order to take it for oneself (as, to *bump* a man from his job).

**BURGER:** A sandwich usually made of a flat roll cut in half and filled either with hamburger or another food specified (as, *pork-burger* or *beefburger*).

**BURP GUN:** A machine pistol.

**BUTADIENE:** A colorless gas, made from petroleum and alcohol, used in the making of synthetic rubber.

**BUY, slang:** To accept; to agree to; to assent (as, to *buy* an idea or an argument).

**BUZZ:** To fly an airplane fast and at a low altitude over (as, to *buzz* an airfield).

**CABANA:** A beach shelter resembling a cabin, usually with an open side facing the sea.

**CADRE:** A nucleus of thoroughly indoctrinated leaders who actively promote the interests of a communist or revolutionary party.

**CAFÉ CURTAINS:** Plain, straight-hanging curtains, usually hung on poles by loops or rings, used to cover the lower part of a window or door.

**CAFÉ SOCIETY:** People who frequent fashionable cafés and night clubs.

**CALYPSO:** A ballad in African rhythm, often a parody or a satire on current events, sung especially by natives of the British West Indies as part of a pre-Lenten carnival.

**CANDID CAMERA:** A camera, usually a small one with a fast lens, used for taking unposed, informal pictures, usually without the subject's knowledge.

**CANNIBALIZE:** To dismantle a machine in order to get parts for use as replacements in other machines.

**CAPSULE:** Of a small type or in a condensed or streamlined form (as, a *capsule* review, criticism, or submarine).

**CAPTIVE AUDIENCE:** An audience obliged to stay within hearing of a speech or broadcast, often being subjected to advertising or propaganda.

**CARD-CARRYING MEMBER:** A Communist to whom a party membership card has been issued and who presumably carries it on his person.

**CARHOP:** A waiter or waitress at a drive-in restaurant who serves food and drinks to customers in their parked cars.

**CARPORT:** A roofed shelter for an automobile, usually attached to another building, and with two or more open sides.

**CARTRIDGE:** A removable pickup in the tone arm of a phonograph.

**CASUAL:** Of clothing, designed in a simple, easy style suitable for informal or sports events.

**CEILING:** A maximum, as for a price, wage, fee, or rent, which is fixed as the upper legal limit by government authority, usually on the basis of the level prevailing at a certain date.

**CERAMAL = CERMET.**

**CERMET:** A strong, heat-resistant metallic alloy.

**CHAIN REACTION:** In chemistry and physics, a process which can continue itself because one of its resulting products is always able to start the process anew until the original material is used up.

**CHALKBOARD:** A smooth flat surface, often of slate or composition, for writing on with chalk.

**CHALKTALK:** A talk or lecture which the speaker illustrates by making drawings or cartoons as he talks.

**CHANNEL:** A narrow band of frequencies on which a radio or television program may be transmitted.

**CHARACTER ASSASSINATION:** The attempt to discredit or destroy the reputation of another person, often by making vague, unproved accusations.

**CHEAP:** Having a depreciated purchasing power or value, especially as the result of a currency inflation (as, *cheap* dollars).

**CHEESECAKE:** Photography or photographs intended to display or accent female charms or attractions; also, any photograph having a considerable amount of sex appeal.

**CHICHI, slang:** Stylish; chic; fashionable; also, affected or esoteric.

**CHLORAMPHENICOL:** An antibiotic effective against certain rickettsiae and viruses.

**CHLORDANE or CHLORDAN:** An odorless liquid insecticide.

**CHORAL SPEAKING:** Interpretive reading or recitation, usually of poetry or rhythmic prose, by a group of voices known as a *speech choir*.

**CHOREOGRAPH:** To compose and arrange a ballet or dance; also, to provide a subject or a piece of music with a ballet or dance.

**CHOROSCRIPT:** A system of notation used in teaching and recording dance figures and steps.

**CINCHER:** A wide, snug-fitting ornamental belt for women.

**CLASSIFIED:** Forbidden to be revealed out-

side authorized circles, for reasons of national security.

**CLOAK-AND-DAGGER:** Of literature, dealing in intrigue and melodramatic action, usually of characters in a colorful historical setting, and involving espionage, duels, or the like.

**CLOBBER, slang:** To beat or pound mercilessly; also, to defeat overwhelmingly.

**CLOSED CIRCUIT:** Television transmission in which the signal is not broadcast but can be received only by interconnected receivers.

**CLOUD CHAMBER:** A closed vessel containing saturated water whose sudden expansion makes visible by a trail of white droplets the passage of an ionized particle.

**CLOUD SEEDING:** The introduction of a substance, as dry ice or silver iodide, into certain types of clouds in order to cause rainfall.

**CLOVERLEAF:** A road plan resembling a four-leaf clover, in which one road passes over another, permitting traffic to merge without left-hand or abrupt turns or direct crossings.

**CLUTCH:** A critical point; a pinch (as, to come through in the *clutch*).

**CLUTCH BAG:** A woman's purse or bag, usually small and without a handle, which is carried in the hand.

**COAXIAL CABLE:** A cable used in the transmission of telegraph, telephone, and television signals, consisting of a tube of conducting material surrounding but insulated from a central conductor.

**COFFEE BREAK:** A rest period during the working day, allowing the employee time for a cup of coffee.

**COLD FRONT:** In meteorology, the forward boundary of a mass of cold air.

**COLD WAR:** A struggle between two nations or groups of nations, waged by use of political and economic strategy, propaganda, and other measures short of armed combat.

**COLD WAVE:** In hairdressing, a permanent wave produced by a chemical solution.

**COLLECTIVE SECURITY:** Security of all the members of an association of nations from aggression by any other nation or nations.

**COLORCAST:** A television broadcast in color.

**COMBO:** A small group of musicians, usually jazz players;—from *combination*.

**COMIC BOOK:** A paper-bound book made up of a series of cartoons or comic strips, sometimes humorous, often telling a story of adventure or crime.

**COMMANDO:** A band or unit of troops specially trained for making surprise raids into enemy territory; also, a member of such a unit.

**COMMERCIAL:** That portion of a sponsored radio or television program devoted to advertising; also, the script prepared for the advertising announcement.

**COMMIE:** A member or agent of the Communist party; also, a fellow traveler.

**COMPATIBLE:** Designating a system in which color television broadcasts may also be received in black and white on receivers not specially equipped for color reception.

**COMPOUND F:** A hormone used in the treatment of arthritis.

**CONDITIONER:** A substance which, when added to soil, improves aeration, workability, and crop yield.

**CONSCRIPT:** To enroll by compulsion for military service.

**CONTACT LENS:** A lens of glass or plastic fitted to the eyeball, worn instead of the usual eyeglass to correct defects of vision.

**CONTAINMENT:** Restraint; specif., the restriction of Communism to fixed territorial limits.

**CONTOUR FARMING:** A system of farming in which plowing and planting follow the contour lines of sloping land, thus retarding erosion from the runoff of rainwater.

**CONVERSATION PIECE:** Any unusual or distinctive article, as of clothing or furniture which is likely to attract attention and provide a subject for conversation.

**CONVERTER:** A device for adapting a television receiver to receive channels other than those for which it was designed.

**CONVERTIPANE:** An aircraft that takes off and lands like a helicopter but flies like a conventional airplane.

**COOKOUT:** An outing at which a meal is cooked and eaten in the open.

**CORN:** Corny acting or playing.

**CORNY:** Trite, stale; old-fashioned, uncouth; countrified; also, of music, played or sung in a bland, unsophisticated style.

**CORONARY THROMBOSIS:** A blood clot (*thrombus*) occurring in an artery of the heart.

**CORTISONE:** A compound used in treating rheumatoid arthritis and certain allergies.

**COUNTER-INTELLIGENCE:** Organized activities of military intelligence services designed to block enemy sources of information and deceive the enemy by ruses, misinformation, and the like.

**COUNTERWORD:** A word used in popular speech in such a variety of situations that its original, specific meaning is lost and it serves only as a counter or token used in place of a more definite word (examples: *swell, awful, nice*).

**COURTESY CARD:** An identification card which supposedly assures its holder of favors or special treatment, as from the police.

**CRACK UP:** To crash or cause to crash, as an airplane; hence, to break down; collapse; go to pieces.

**CRASHLANDING:** An airplane landing in which the plane is either damaged or destroyed.

**CREDIT LINE:** A line, note, or name published with an article, news story, photograph, or the like, acknowledging the source.

**CREEPING:** Making, or thought to be making, inroads or undesired progress (as *creeping socialism*).

**CREW CUT:** A short-cropped, bristly haircut for men.

**CURVACEOUS:** Having a feminine figure which is well-proportioned and marked by pronounced curves.

**CUTBACK:** A reduction in a prevailing rate, amount, or number (as, a production *cutback*).

**CYBERNETICS:** Comparative study of the control system in the human brain and nervous system with that in such mechanical-electrical communication systems as computing machines.

**YCLOTRON:** An apparatus used for imparting high speeds to electrified particles, used especially to bombard the nuclei of atoms in order to produce transmutations and artificial radioactivity.

**CAISY:** A circular cheese, usually about 12 to 14 inches in diameter and weighing between 18 and 24 pounds.

**DT:** A colorless, odorless insecticide, used especially against body lice, flies, mosquitoes, and agricultural pests.

**HEAD DUCK:** Anything doomed or past recovery.

**HEADPAN:** A completely expressionless, immobile face.

**ECAMISADO:** A member of the Argentine working class.

**DECONTROL:** To remove control from (as, to *decontrol* the price of eggs).

**DE-EMPHASIZE:** To diminish in importance; to make less prominent (as, a move to *de-emphasize* football at a college).

**DEEP-FREEZER:** A cabinet where food may be quick-frozen and stored.

**EFFICIT SPENDING:** Spending in excess of income;—usually applied to a government.

**EGREE DAY:** A unit that represents one degree of declination from any given point in the mean outdoor temperature for a day, often used in measuring fuel requirements for a building.

**ICE-ICER:** Any system or mechanism used to rid or keep free of ice the wings and tail of an aircraft.

**DELTA WING PLANE:** A fast, high-flying airplane, triangular in shape, like the Greek letter delta.

**ELTIOLGY:** The hobby of collecting post cards.

**ENAZIFY:** To rid (the people or institutions of a Nazified country) of Nazism and its influence.

**ESENSITIZE:** In psychiatry, to free from a neurotic state; to make immune to a morbid emotional domination.

**ETECTAPHONE:** A telephone apparatus equipped with a microphone transmitter, used especially for listening secretly.

**ETERGENT:** A soluble or liquid preparation, often called "soapless soap," that resembles soap in its ability to emulsify oils and hold dirt in suspension.

**IAL TONE:** A steady hum, audible in a telephone receiver, indicating that the line is free and a number may be dialed.

**ILLY:** Something of superior or remarkable quality; often, something presenting unusual difficulties or complications.

**IM OUT:** To obscure in dimness, as by restricting illumination to specks or slits of light, lights shaded from above, or blue lights.

**IRECTIVE:** An order or instruction as to plan or procedure, such as might be issued by a military official, or by a government or business executive.

**ISC JOCKEY or DISK JOCKEY:** One who

conducts and announces a program of musical records, usually with advertising or nonmusical comments interspersed.

**DISCOGRAPHY:** A descriptive, classified catalogue or listing of phonograph records, usually including dates and performers.

**DISCOPHILE:** An enthusiastic collector or student of phonograph records.

**DISPLACED PERSON or DP:** A person driven or deported from his home country during World War II as a prisoner of war, or for forced labor, or because of his race, politics, or religion.

**DOCUMENTARY:** A film that depicts in artistic form a factual and authentic presentation, as of an event or a social or cultural phenomenon.

**DOODLE:** An aimless, somewhat automatic design, sketch, or scribbling made while one's mind is occupied with something else.

**DOSIMETER:** A device for measuring the amount of radioactivity absorbed by the body.

**DOUBLE-DOME:** A highbrow; an intellectual.

**DOUBLE-TAKE:** A delayed reaction to the importance or meaning of something that at first escaped notice;—usually in the phrase, to do a *double-take*.

**DOUBLE TALK:** Talk or writing that appears to be earnest and meaningful but is actually a mixture of sense, gibberish, and unintelligible verbiage.

**DOUBLE-THINK:** The ability to have in mind at the same time two contradictory beliefs and accept both;—coined by George Orwell in the novel *Nineteen Eighty-Four*.

**DRIVE-IN:** A place of business, as a theater or restaurant, designed to permit patrons to remain in their automobiles while watching a performance or making purchases.

**DRONE:** A pilotless airplane controlled by radio from the ground or another plane; also, a vessel similarly controlled.

**DRUNKOMETER:** A device for detecting and measuring the degree of alcoholic intoxication by analysis of the breath.

**DUB:** To provide (a film) with a new soundtrack; to blend music or sound effects into (a radio or television broadcast).

**DUCK:** An amphibious military vehicle having wheels and a propeller, that can be used as either a truck or a barge.

**DYNEL:** A synthetic textile fiber in staple form; also, the material made from this fiber.

**EARMOLD:** The portion of a hearing aid that fits into the ear.

**ECDYSIAS:** A strip-teaser;—a humorous term coined by H. L. Mencken.

**EGGHEAD:** An intellectual; a highbrow.

**ELDER STATESMAN:** A man who has retired from active public life but continues to act as an unofficial advisor, especially to government officials.

**ELECTRONICS:** The branch of physics that deals with the emission, motion, and effects of electrons.

**ELECTROSHOCK:** A state of shock induced by the passage of an electric current through the brain and useful in the treatment of certain mental disorders.

**EMCEE:** A master of ceremonies;—from *M. C.*



- ENRICH:** To improve (a food) in nutritive value by adding vitamins and minerals to it during processing.
- ESCALATOR CLAUSE:** A clause in a contract providing adjustment to cover such possibilities as increases or decreases in costs of labor, material, or living.
- ESCAPE LITERATURE:** Literature or writing providing mental escape or distraction from routine or reality.
- EXPEDITER:** One whose job it is to ensure an adequate supply of raw materials for fulfilling production contracts and to direct the movement of processed goods to where they are needed or wanted.
- EXPOSURE METER:** An instrument used by photographers for indicating the correct amount of exposure under varying light conditions.
- EXPRESSWAY:** A superhighway.
- FADE:** In radio and television, to change gradually in loudness or distinctness (as, to *fade* a picture or a sound in or out).
- FAIR-TRADE AGREEMENT:** An agreement between the manufacturer and the distributor of a trade-marked article, prescribing a minimum price for its sale.
- FALTBOAT:** A collapsible boat similar in size and shape to a kayak.
- FAST BUCK:** Money that can be made readily or quickly, usually with little effort.
- FEATHERBED RULE:** A union rule that requires an employer to hire unneeded workmen or to pay for duplication of jobs; also, one limiting the amount of work that workmen may do in a day.
- FEATHER MERCHANT, *slang*:** One who tries for easy jobs or is thought to be lazy; also, *military slang*, a civilian.
- FEATURETTE:** A short feature; specif., a motion picture of less than the usual length.
- FEEDBACK:** A partial return of the effects or product of a process to its source or to a preceding stage;—used especially of social, psychological, or biological systems.
- FELLOW TRAVELER:** One who sympathizes with and, often, furthers the program or ideals of, a group (originally, the Communist party) without being a member of the group.
- FIFTH COLUMN:** Secret supporters of an enemy engaged in sabotage or other subversive activity within defense lines.
- FINGER PAINTING:** A technique in which splotches of pigments (*finger paints*) are applied to wet paper and spread with the hands or fingers to form a picture or design.
- FSSION:** The splitting of the nucleus of an atom into two nearly equal parts, resulting in a tremendous release of energy.
- FISSIONABLE:** Capable of undergoing fission.
- FIVE PERCENTER:** One who undertakes to aid businessmen in obtaining contracts or doing other business with the government, usually for a fee of five per cent.
- FLAME-OUT:** A sudden blowing-out of the fire of a jet engine, caused by improper functioning of the fuel-supply system.
- FLIPOVER CARTRIDGE:** A phonograph cartridge that has separate needles for playing both microgroove and standard records and that may be turned to bring the proper needle into playing position.
- FLUFF:** To bungle or stumble in delivering one's lines during a performance; also, to miss a cue.
- FLUID DRIVE:** An automotive power coupling between the flywheel of the engine and the transmission gears that operates on the hydraulic turbine principle.
- FLUORIDATION:** Treatment of drinking water with a fluoride to prevent tooth decay.
- FLYING SAUCER:** Any of various unidentified objects, usually described as disc- or saucer-shaped, reportedly seen in the air.
- FOAM RUBBER:** A spongy, fine-textured rubber used especially for cushions, mattresses and the like.
- FOLD:** To discontinue production or business for lack of patronage or because of public neglect (as, the stage play *folded* after only two performances).
- FRAME OF REFERENCE:** The environment of personal knowledge or experience in which an idea is conceived or interpreted.
- FREELoader:** A "sponge"; one who frequently obtains something (as food or drink) that is paid for by someone else.
- FREEWAY:** An express highway that bypasses towns and is largely free of intersection with a superhighway.
- FREEZE:** To fix inflexibly, as by an executive order, at a given level or in the status on a given day (as, to *freeze* a price or a design).
- FREQUENCY MODULATION or FM:** A virtual static-free system of radio broadcasting in which the frequency of the carrier wave is modulated in accordance with the form of the sound or signal wave.
- FRINGE AREA:** An area on the outer edges of one having a greater strength or concentration (as, a *fringe area* for television reception).
- FRINGE BENEFIT:** Any benefit, such as health insurance or sick leave, not included in the basic wage, that workers receive from their employers.
- FROGMAN:** A person equipped for extended periods of underwater swimming, usually for military reconnaissance or underwater demolition.
- FRONT:** A person or group serving as public representative for a pressure group or subversive organization, often unwitting while thinking to act in public or patriotic interests.
- FUSED COLLAR:** A collar, especially one on a man's shirt, that has been lined or otherwise treated to retain its shape.
- GADGETEER:** An inventor or maker of gadgets; also, one given to buying or using them.
- GAGSTER:** A writer of gags or jokes, especially for radio and television programs.
- GAMMA GLOBULIN:** A fraction of blood plasma rich in antibodies and used against diseases such as polio and hepatitis.
- GAPA:** A rocket-powered guided missile used against aircraft and against other missiles—*from ground-to-air pilotless aircraft*.
- GENOCIDE:** A calculated attempt to destroy systematically a racial, religious, or political group.

- ical group; also, an effort to destroy the language, religion, or culture of a group.
- GERIATRIC:** Of or pertaining to *geriatrics*, the branch of medicine dealing with old age and its diseases; also, aged (as, the *geriatric* patient).
- GHETTO:** A quarter of a city in which members of a racial group are segregated by social and legal pressure.
- GI:** A person who is serving or has served as an enlisted member of the U. S. armed forces.
- GIMMICK:** A trick; a clever or artful device or scheme.
- GISMO:** A gadget; device; contraption; also, anything without a name.
- GIVEAWAY:** A radio or television show in which members of the audience participate and receive prizes.
- GOBBLEDYGOOK:** Involved or obscure language such as is frequently found in official pronouncements.
- GOLDBRICK, slang:** To shirk or find excuses to evade assigned work.
- GOOFBALL, slang:** A sleeping tablet, especially one of the barbiturates.
- GOOGOL:** In mathematics, the figure 1 followed by 100 zeros.
- GRASSROOTS:** The farming districts of the country; also, the people living in them, thought of as a politico-economic group holding firm and independent views.
- GRAVEYARD SHIFT:** The third of three daily shifts, as in a factory, usually beginning at midnight.
- GREEN THUMB:** A special or unusual ability to make plants grow;—usually in the phrase, to have a *green thumb*.
- GREMLIN:** An impish gnome, whimsically accused by airmen of tampering with motors, instruments, and the like.
- G-SUIT:** An inflatable suit worn by aviators during rapid aerial maneuvers to counteract the effects on the body of pressure greater than gravity.
- GUIDED MISSILE:** Any missile whose course may be directed during passage by a built-in target-seeking device or by radio control.
- GUN:** To open the throttle of (an engine) to increase the speed.
- GYROPILOT:** A control mechanism, sometimes called *automatic pilot*, that keeps an airplane in level flight and on a set course.
- HALF-TRACK:** One of the endless chain-tracks used instead of the rear wheels on a certain type of vehicle; also, a tractor or truck with half-tracks and front wheels.
- HARDTOP:** An automobile having most of the characteristics of a convertible, but with a stationary steel top.
- HASSLE:** A mix-up; also, an argument or fight.
- H-BOMB or HYDROGEN BOMB:** An extremely powerful fusion bomb.
- HEDGEHOP:** To fly an airplane so low that it has to "hop" over trees and hedges.
- HELIPORT:** A place for helicopters to land in order to discharge or receive passengers or cargoes.
- HEPCAT:** A musician in a jazz band; also, a devotee of jazz.
- HEX:** A spell or enchantment; a jinx (as, to put the *hex* on someone).
- HIGH FIDELITY or HI-FI:** The reproduction of sound, usually by a radio or phonograph, with a high degree of faithfulness to the original.
- HIT PARADE:** A listing, as of popular songs or books, in order of current public preference.
- HOOD, slang:** A hoodlum; a rowdy.
- HOOPER or HOOPERATING:** An indication, based on the results of telephone polling, of the popularity of a radio or television program.
- HORSE'S TAIL = PONY TAIL, below.**
- HOT:** Radioactive; also, having to do with radioactive material (as, a *hot* laboratory).
- HOT ROD, slang:** An out-of-date automobile with the trimmings stripped off and the engine stepped up to permit high speeds.
- HOWGOZIT CURVE:** A running graph of the progress of an aircraft flight, especially a transoceanic one.
- HUCKSTER:** One whose business is commercial advertising, especially the preparation of clever, effective advertising programs for radio and television broadcasts.
- HYBRID CORN:** A crossbreed of Indian corn developed from selected strains and having the best characteristics of each.
- HYDROPONICS:** The growing of plants, especially vegetables, with their roots in water that contains the essential minerals, instead of in soil.
- HYPERTENSION:** Abnormally high arterial blood pressure; also, the resulting systemic condition.
- INFLUENCE PEDDLER:** One who tries to get special privileges, especially from the government, for his clients; a five-percenter.
- IN-SERVICE:** Taking place or continuing while in service (as, *in-service* training).
- INSTITUTE:** A short program of instruction or conferences for people already at work in a given field (as, a farmers' *institute* or a bankers' *institute*).
- INTERCOM:** A two-way short-distance communication system with microphones and loud-speakers at each end;—short for *intercommunication system*.
- IRON CURTAIN:** A barrier created by such means as censorship and prohibition of free travel to isolate Russian-controlled territory from outside contacts; hence, any similar barrier against communication.
- IRON LUNG:** A tank device for artificial respiration that forces air into and out of the patient's lungs.
- ISOBAR:** One of two atoms or elements having the same atomic weights but different atomic numbers.
- ISRAELI:** Of or relating to the Jewish state of Israel, in Palestine.
- ISSEI:** A Japanese immigrant to the U. S.; legally, an alien.
- JATO UNIT:** An auxiliary means of propulsion in which rocket engines are used to assist the take-off of an airplane;—from *jet* assisted take-off.
- JEEP:** A small, rugged multipurpose motor vehicle; originally one having four-wheel drive.

- JET PROPULSION:** Propulsion of a body by forces resulting from the rearward discharge of a jet (a high-speed stream of fluid) through an orifice. The forces are a reaction to the discharge of the jet, in accordance with the Newtonian law that to every force there is an equal and opposite reaction.
- JIVE:** The slang or jargon used by swing musicians and jitterbugs; also, any similar slang.
- JUKEBOX:** A coin-operated automatic phonograph-record player.
- JUNKIE, slang:** A narcotics user or addict.
- KEYNESIAN:** Of or pertaining to a system of economics (often associated with the New Deal) advocating considerable government participation in the economic affairs of a country.
- KICKBACK:** The return of part of a sum received, as of wages or fees, prompted by a previous confidential agreement or by coercion.
- KINESCOPE:** A form of cathode-ray tube with a screen at one end on which television pictures or oscillographs may be produced;—called also *picture tube*.
- KINESICS:** The study of such body motions as winks and waves as related to communication between people.
- KNOW-HOW:** Technical skill and practical ability; competence in planning or producing something.
- LANDING CRAFT:** Any of numerous naval warcraft designed for putting ashore troops or equipment in beach assaults.
- LATCH ON TO:** To attach oneself; also, to appropriate; to take over.
- LEFTIST:** One who belongs to a radical or revolutionary party; also, one who holds or advocates ultraliberal principles.
- LEPROMIN TEST:** A test for the recognition of immunity to leprosy.
- LIBRETTO:** The plan or scenario for a ballet.
- LIQUIDATE:** To kill secretly; also, to eradicate ruthlessly.
- LOAFER:** A man's or woman's low leather step-in shoe, resembling a moccasin but having a flat heel and stiff outsole.
- LOBOTOMY:** A leucotomy; an incision into the frontal lobe of the brain to sever nerve fibers in an attempt to relieve certain mental disorders.
- LOCKER PLANT:** A business establishment having quick-freezing equipment and lockers for storing frozen foods.
- LONGHAIR:** Idealistic; intellectualized; highbrow (as, *longhair* music or *longhair* writing).
- LOYALTY OATH:** A signed statement of loyalty, often one in which the signer affirms loyalty to the U. S. and denies any Communist connections or sympathies.
- LYSENKOISM:** A biological doctrine advanced by T. D. Lysenko, Russian agronomist, in defiance of orthodox genetics.
- MAE WEST:** A yellow life-saving jacket that can be inflated by two cartridges of carbon dioxide, worn especially by airmen in flights over water.
- MEGADEATH:** One million deaths (as, the power of an atomic bomb may be indicated in terms of *megadeaths*).
- MEGATON:** A million tons; also, an explosive force equal to that of a million tons of TNT;—used especially with reference to hydrogen bomb.
- MERCY KILLING:** Euthanasia; killing, especially in a quick, painless manner, to put the victim out of extreme pain or misery.
- ME-TOO-ISM:** The echoing of another's opinions or attitudes, usually implying an inability or unwillingness to think for oneself.
- MICROFILM:** A strip of film on which a reduced-size photographic record of printed matter may be kept in a small space.
- MICROGROOVE:** A narrow V-shaped groove used on phonograph records intended to play at speeds of 33 1/3 or 45 revolutions per minute.
- MIDDLEBROW:** Middle-class; midway between highbrow and lowbrow.
- MILK BAR:** A place where milk, ice cream and other dairy products are sold and may be consumed.
- MOBILE:** A delicately balanced type of sculpture, usually having movable parts which can be set in motion by air currents or other means.
- MOLOTOV COCKTAIL:** A crude explosive device, typically, a gasoline-filled bottle capped with an oil-soaked rag that is ignited just as the bottle is thrown at the target.
- MOMISM:** A supposed excessive admiration and sentimentalizing of mothers, thought to permit a possessive mother to deny her offspring emotional independence.
- MONITOR:** To check (a radio or television transmission) for quality or fidelity to band; also, to check (as a broadcast) for military or political significance.
- MONOLITHIC:** Consisting of one large, undifferentiated whole, exhibiting one harmonious pattern throughout (as, a *monolithic* party or culture).
- MONTAGE:** The production of one complete picture by combining several distinct ones often in such a way that they blend with or into each other.
- MORETIC:** Pertaining to mores or social conventions.
- MOTEL:** A hotel or group of furnished cabins or attached cottages, situated near a highway, offering accommodations to automobile tourists.
- MOTHBALL:** That which has been placed in indefinite, protective storage (as, a *mothball* fleet or airplane).
- MOTORCADE:** A parade or procession of automobiles.
- MOTOR POOL:** A group or fleet of motor vehicles for use as needed by different organizations or individuals.
- MULTIPHASIC:** Having or considered in terms of many aspects or phases (as, a *multi-phasic* approach to a problem).
- MUSCULAR DYSTROPHY:** A hereditary disease in which there is progressive wasting away of the muscles.
- NAPALM:** A thickener used to gel gasoline for incendiary bombs and flame throwers.
- NEEDLE:** To vex or annoy by repeated sharp gibes; also, to goad or prod.



**NEWSCASTER:** One who broadcasts news, as on radio or television; also, a commentator.

**NIACIN:** A member of the B-vitamin group useful in the prevention of pellagra;—called originally *nicotinic acid*.

**NISEI:** A U. S. citizen born of Japanese immigrant parents.

**NONOBJECTIVE:** In art, creating effect through shapes and colors not intended to represent actual objects; abstract.

**NO-SHOW:** A passenger who, after making a reservation on an airplane, does not show up to claim it at flight time and has made no cancellation.

**NUCLEAR:** Having to do with the atomic nucleus (as, *nuclear physics*).

**NURSERY SCHOOL:** A center for children, usually under 5 years of age, providing supervised play and social training for a few hours a day.

**NYLON:** A synthetic material that can be fashioned into tough, strong, elastic threads and used in making brush bristles, hosiery, textile fabrics and the like.

**OCCUPATIONAL THERAPY:** The treatment of disease or injury by giving the patient regulated work that will help his recovery or rehabilitation.

**OMNIBUS:** A book of reprints, usually one containing works of the same type or by a single author.

**OPPOSITE NUMBER:** A person or position in one system corresponding to one in another (as, an ensign is the *opposite number* of a second lieutenant).

**OSCAR:** One of the statuettes awarded annually for highest excellence in motion picture work; hence, any annual award for excellence.

**PACKAGE:** A fully constructed, prearranged program or plan, such as a radio show or tour, usually offered for sale at a flat sum; also, any finished product made ready for immediate use by preassembling all essential elements into a unit.

**PAN:** To move (a camera) in order to follow a moving object or secure a panoramic effect.

**PANIC SWITCH:** The control on the ejector mechanism that throws a jet pilot from his plane in case of emergency.

**PARAPSYCHOLOGY:** A branch of psychology concerned with investigating evidence for telepathy, clairvoyance, and the like, and with experiments in the field of extrasensory perception.

**PARA-RESCUE TEAM:** A team of rescuers who drop by parachute, as to the scene of a plane crash, in order to give immediate aid to anyone in distress.

**PARITY:** The balance between the prices the farmer receives for his products and the prices he has to pay for the things he must buy.

**PARTISAN:** A member of a guerilla band working behind enemy lines and engaged in such activities as sabotage, demolition, and diversionary attacks.

**PARTY DISCIPLINE:** The discipline imposed on its members by a party;—usually applied to the Communist party.

**PARTY LINE:** The policy or course of action

followed by a party, originally specifically by the Communist party.

**PATCH TEST:** A test for determining susceptibility, made by applying to the skin small pads soaked with the allergy-producing substance in question.

**PEDAL PUSHERS:** Women's trousers, usually calf-length, for sports wear.

**PENICILLIN:** An antibacterial substance extracted from green mold, useful in treating infections.

**PERIL POINT:** The lowest rate to which a tariff can be reduced without injuring the industry of the country levying it.

**PHOTOMURAL:** An enlarged photograph, usually several yards long, affixed to a wall as decoration.

**PICTURE TUBE = KINESCOPE.**

**PICTURE WINDOW:** An extra-large window, usually in a living room, framing a desirable outside view.

**PIGGY-BACK PLANE:** A small airplane carried aloft on the "back" of a larger one, from which it is released in mid-air.

**PIPE:** In radio and television, to transmit (a program) by wire or coaxial cable.

**PIZZA:** A large flat tart made of bread dough spread with pieces of tomato, cheese, and shreds of meat, anchovies or the like, flavored with herbs, and baked thoroughly.

**PIZZERIA:** A restaurant or bakery where pizzas are made and sold.

**PLATTER:** A phonograph record.

**PLUNGING NECKLINE:** A very deep V-neckline in women's apparel.

**PLUSH:** Luxurious; over-elegant (as, a *plush* summer resort).

**POLICE STATE:** A totalitarian state having repressive government control of radio, press, culture, and economic and political life.

**POLITIC:** To campaign for political office; also, to seek to further a special end.

**POLLEE:** One who is questioned in or gives answers for a poll.

**POLO SHIRT:** A close-fitting pullover jersey or sport shirt of cotton knitwear, originally patterned after jerseys worn by polo players.

**PONY TAIL:** A hairdo for women, in which the hair is drawn back tightly from the face and up from the neck, and tied.

**POODLE CUT:** A very short, curly hairdo for women, in imitation of a poodle's coat.

**POP:** Short for *popular*;—used especially of music other than classical.

**PORTAL-TO-PORTAL:** Pertaining to the time a workman spends traveling from the portal or gate of company property to his actual place of work and in returning at the end of the work shift.

**PREFAB:** A prefabricated house or structure, construction of which consists merely of assembling and uniting standardized parts.

**PRESSING:** A phonograph record made from a matrix; also, the whole number of such recordings made at a single time.

**PRESSURE GROUP:** A minority group that brings pressure to bear on legislators or public opinion, often by lobbying or use of propaganda, to force legislation or change public policy.

- PRESSURE SUIT:** A suit worn by pilots flying at high altitudes, which inflates automatically when pressure inside the plane is lost.
- PRESSURIZE:** To maintain near-normal atmospheric pressure inside (the sealed cabin of an airplane) during high-level flight.
- PRIVATE EYE:** A private detective.
- PROFILE:** A vivid, concise biographical sketch; also, a concise analysis of any subject.
- PROXIMITY FUZE:** A device for making a projectile explode near the target.
- PSYCHODRAMA:** A spontaneous drama in which the actors exhibit their natural psychological reactions to a given situation, used especially in treating the mentally ill.
- PSYCHOMETRICS:** A branch of psychology that deals with the use and application of mental measurement; also, the technique of such measurement.
- PSYCHOSOMATIC:** Of or pertaining to the influence of mental factors on bodily disorders.
- PUBLIC RELATIONS:** The activities of a corporation, government, or other organization in building and maintaining good relations with the general public or with special groups.
- PUNCH CARD:** A data card with punched holes in particular places, each having an assigned significance, used in certain automatic business machines.
- PURGE:** To rid (a state or party) of members suspected of disloyalty.
- PUSHOVER:** An opponent easily defeated or a victim incapable of effective resistance; also, any problem presenting no real difficulties.
- QUARTERBACK:** To direct; to make plans and give instructions for carrying them out.
- QUICK-FREEZE:** To freeze (food) so rapidly that the natural juices and flavor are preserved.
- QUICKIE:** Anything hastily prepared or made; anything done without much preparation.
- RABBIT EARS:** A small indoor television antenna composed of two rods projecting upward from a ball-base in the form of a V.
- RACISM:** The assumption that certain races are naturally superior to others; also, any doctrine or program based on such an assumption.
- RADAR:** A powerful radio detecting device capable of establishing the distance, altitude, and direction of motion of any object in the path of its beam.
- RADIANT HEATING:** The heating of a house or room by heat radiated from large surfaces, such as floors, walls, or baseboards, that have first been warmed by heating coils or hot-air ducts.
- RADIATION SICKNESS:** An illness that results from exposure to radiation, as in radiotherapy or an atom bomb explosion.
- RANCH HOUSE:** A one-story dwelling, usually with an informal interior plan and a low-pitched roof.
- REACTOR:** An arrangement of fissionable material designed for the production and control of a chain reaction;—called also *nuclear reactor* and *pile*.
- RECESSION:** A slowing down of commercial and industrial activity, less severe than depression; also, a period of such slackening.
- RECONVERSION:** The process of converting (especially a war plant) back to the production of civilian goods.
- RED-BAITER:** One who baits, attacks, or harasses communists or radicals.
- REFRESHER:** Providing reinstruction after a period of inactivity or instruction designed to keep one abreast of new developments in a field (as, a *refresher* course in automotive mechanics).
- RESISTANCE:** An organized underground movement in a conquered country made up of groups of fighters engaged in sabotage and secret operations against occupation forces;—often with *the*.
- REV:** To raise or lower the number of revolutions per minute;—originally, of an airplane motor.
- Rh FACTOR:** A factor present in the red blood cells of 85 per cent of white persons (Rh positive) and absent in 15 per cent (Rh negative), so called because discovered in the blood of Rhesus monkeys. Rh incompatibility is manifested by red cell destruction and occurs when the two types are mixed in one person, especially as in the infant of an Rh-positive father and Rh-negative mother.
- RHUBARB:** A heated argument or dispute often one that takes place on the field during a baseball game.
- RIBOFLAVIN:** Vitamin B<sub>2</sub>, the growth-promoting substance of the vitamin-B group.
- RIGHTIST:** In politics, a member of the right, a conservative or royalist.
- ROBOT BOMB:** A small, pilotless jet-propelled airplane, steered by a gyroscopic device and loaded with explosives, that falls as an aerial bomb when its fuel supply is gone.
- ROC:** An aerial bomb with a television apparatus that transmits information back to the bombardier, who may then correct his initial aim by remote radio control.
- ROCKET SHIP:** An aircraft propelled by rocket power.
- ROLLER DERBY:** A form of sport in which teams on roller skates race around a track.
- ROTATION:** The military system of exchanging individuals or units assigned to combat or arduous duties with personnel more comfortably situated.
- RUMPUS ROOM:** A room in a home, often in the basement, set apart and suitably furnished for games and recreation.
- RUPTURED DUCK:** The symbol of an eagle with wings outspread depicted in the discharge emblem for personnel of the U. S. armed services.
- RUSSIAN ROULETTE:** A game or act of bravado in which the "player" puts one cartridge into a revolver, aims it at himself, spins the cylinder, and pulls the trigger.
- SATELLITE:** A state or country politically

and economically dominated by a more powerful neighboring one.

**SCAN:** In radar, to cause (a certain area) to be traversed by a directive beam.

**SCARE BUYING:** Sudden buying, often involving an overstocking, of certain goods because of the fear that they may become scarce or unobtainable.

**SCHMOE** or **SCHMO**, *slang*: A stupid person; a misfit; a jerk.

**SCIENCE FICTION:** Imaginative or fantastic fiction, dealing especially with such subjects as life in the future, interplanetary travel, and life on other planets.

**SCRATCH TEST:** A test for determining susceptibility, made by rubbing an extract of the allergy-producing substance into the skin.

**SCREEN:** To pass through a standardized test for sorting out candidates according to abilities or eliminating the unfit; hence, to examine or select methodically.

**SCREWBALL:** Someone whose ideas or actions are crazy or fantastic; also, anything ridiculously absurd or zany.

**SCRIPTER:** A writer of scripts, as for movies, radio, or television.

**SEND:** In swing music, to perform with or inspire to spontaneous improvisations; also, to play so as to elate a listener.

**SHAKEOUT:** A moderate slowing down of commercial and industrial activity with a decrease in prices and employment, usually regarded as a readjustment toward normal after a period of inflation.

**SHARP**, *slang*: Conspicuously attractive; in keeping with the latest styles, as of clothing or speech.

**SHOCK THERAPY:** Treatment of mental disorders by means of a coma induced artificially by the administration of drugs or electric shock.

**SHOOTING WAR:** Conflict involving actual participation of armed forces in combat, as opposed to a war of nerves or a propaganda war.

**SHOPPING CENTER:** A group of retail stores or other business places, sometimes in one building, and usually provided with a large parking lot.

**SIGNATURE:** A tune or sound effect used to identify a particular radio program or feature;—called also *theme*.

**SILK SCREEN PROCESS:** A stencil method in which a design is made on a fine-mesh silk screen and transferred to another surface by forcing pigment through the screen with a squeegee.

**SIMULCAST:** A simultaneous broadcast of a program by radio and television; also, a program thus broadcast.

**\$64 QUESTION:** The most baffling question in a given situation, often one that defies direct answer.

**SKIP-STOP:** Not stopping at all points (as, *skip-stop* elevator or subway service).

**SKYSWEEPER:** A radar-aimed anti-aircraft weapon.

**SKYTYPING:** A technique, similar to sky-writing, in which seven equally spaced aircraft emit puffs of smoke to form the letters of a message.

**SLICK** or **SLICK PAPER:** A large-circulation magazine printed on glossy paper;—usually implies slightness of content and technical smoothness.

**SMAZE:** A combination of smoke and haze.

**SMEAR:** To defame or blacken the reputation of a person or group by name-calling or by maliciously spreading exaggerated charges or rumors.

**SMEAR CAMPAIGN:** A concentrated program of vilification and smearing.

**SNACK BAR:** A counter or bar at which light refreshments and lunches are sold or served.

**SNEAK PREVIEW:** An unannounced showing of a new motion picture, usually to determine audience reaction to it.

**SNOLLYGOSTER:** A rascal or an unscrupulous person, especially an unprincipled politician.

**SNOW:** Small, moving, bright or dark spots on a television screen, resulting from the same causes as static in radio.

**SOAP OPERA:** A daytime radio or television serial drama performed on a commercial program chiefly for housewives.

**SOCIALIZED MEDICINE:** Administration by a government or other organized group of medical and hospital services for all members of a class or all members of the population.

**SONAR:** An apparatus that detects the presence and location of submarines or other underwater objects;—from sound navigation and ranging.

**SOUFFLÉ:** Tiny multicolored beads of glass or metal, used for embroidery.

**SOUND CONDITIONING:** The control of sound, as in an auditorium, by eliminating unwanted noise and excessive reverberations.

**SOUP UP:** To step up the horsepower of a motor, as on an airplane or a jalopy.

**SPACE:** Popularly, the region beyond the earth's atmosphere, lying between and beyond the planets and the stars.

**SPACE MEDICINE:** A suggested branch of medicine which would try to study conditions of outer space and their effect on the human body.

**SPACESHIP:** An imaginary aircraft for interplanetary travel.

**SPEECH CLINIC:** A clinic for the diagnosis and correction of speech disorders.

**SPELUNKER:** One whose hobby is exploring and studying caves and underground phenomena.

**SPIV**, *slang*: One who contrives to make a living without working; a slacker.

**SPLINTER GROUP:** In politics, a group broken away from a larger, original organization.

**SPLIT-LEVEL HOUSE:** A house built on different levels, usually with the floor level of a single-story section about midway between the floor levels of an adjoining two-story section.

**SPOTTER:** A civilian who watches the sky to report and identify approaching aircraft.

**STATELESS:** Without a state or nationality, as a person who was a citizen of a country no longer in existence.

**STATESIDE:** Of, or coming from the continental U. S.



- (as, a transfer from Alaska to *stateside* duty).
- STATIONARY FRONT:** In meteorology, a boundary between two air masses which show little or no movement.
- STATION BREAK:** In radio and television, the pause in a program or between programs to permit stations to identify themselves.
- STATION WAGON:** A sedanlike automobile having a tail gate and back seats that can be removed or folded so the vehicle can be used for light trucking.
- STATISM:** Government control or direction of important aspects of the economic life of a citizen.
- STEREOPHONIC:** Of reproduced sound, giving the effect of coming from two or more directions.
- STOCK CAR RACING:** Automobile racing in which ordinary cars are used rather than specially constructed racers.
- STOCKPILE:** A reserve supply of any essential material accumulated and stored as a safeguard against a shortage.
- STORM COAT:** A tailored winter coat for men or women, usually having a heavy lining and a mouton collar, and often made of gabardine.
- STRAWHAT CIRCUIT:** A summer theater circuit, often including the more popular resort areas.
- STREPTOMYCIN:** A substance extracted from certain soil bacteria and used against the bacteria of certain diseases, as typhoid fever, tularemia, and tuberculosis.
- SULFA:** Of or belonging to a class of drugs that are related to sulfanilamide and have a destructive action against certain types of bacteria.
- SUPERHIGHWAY:** A highway consisting of four or more lanes, designed for fast-moving traffic.
- SUPERMARKET:** A large, departmentalized retail store, usually self-service, selling foods and other household merchandise.
- SUPERSONIC:** Designating a speed greater than that of sound (about 738 miles per hour); also, moving or capable of moving at such speed (as, a *supersonic* aircraft).
- SWING SHIFT:** The work shift between the day and night shifts in a factory operating on a 24-hour basis, usually from 4 p.m. to midnight.
- SYNC:** In motion pictures and television, short for *synchronize* or *synchronization*.
- TAKE-HOME PAY:** The remainder of a person's gross wages after deductions, as for income-tax withholding, retirement, and union dues, have been made.
- TAPE:** A magnetized ribbon on which sounds may be recorded. — To record (sounds) on such a ribbon.
- TELECAMERA:** A television camera.
- TELECAST:** A program broadcast by television. — To broadcast by television.
- THEATER-IN-THE-ROUND:** A theater so arranged that the action area is in the center and the audience is seated on all sides of it;—called also *arena theater*.
- THERMONUCLEAR:** Pertaining to the heat energy resulting from or connected with changes in the nuclei of atoms.
- THIAMINE:** A vitamin, also known as *vitamin B<sub>1</sub>*, that prevents beriberi and certain kinds of neuritis.
- THOUGHT CONTROL:** Repressive control or domination of individual ideas and thinking by another person or group.
- THREE-DIMENSIONAL** or **3-D:** Giving the illusion of depth or varying distances;—applied to pictures, especially stereoscopic motion pictures.
- TONE ARM:** The movable part of a phonograph that contains the sound box or pickup and permits the needle to follow the grooves in the record.
- TOP-DRAWER:** Of the highest or first order of rank, excellence or importance.
- TRACE ELEMENT:** A chemical element, usually a metal, essential in minute amounts to the welfare of a plant or animal.
- TRACKMOBILE:** A lightweight tractor used for moving railroad cars in a switchyard.
- TRANSISTOR:** An electronic device similar in use to the electron tube.
- TWEEDY:** Given to or fond of wearing tweeds;—usually implying a certain matter-of-factness, robustness or informality of manner.
- TWEETER:** A small loudspeaker that responds only to high sound frequencies and is used to reproduce sounds of high pitch.
- 2,4-D:** A white crystalline compound used as a weed killer.
- ULTRAHIGH FREQUENCY** or **U.H.F.:** In radio and television, any frequency in the range from 300 to 3000 megacycles.
- VEEP:** A vice-president.
- VERY HIGH FREQUENCY** or **V.H.F.:** In radio and television, any frequency in the range from 30 to 300 megacycles.
- VIDEO:** *Television.* Pertaining to or used in sending or receiving the image (as, *video* frequency). Contrasted with *audio*.
- VIDEOCAST:** A television broadcast.
- VIP:** A very important person; sometimes, one using an assumed name for security reasons.
- WALKIE-LOOKIE:** A portable, battery-operated television camera.
- WALKIE-TALKIE:** A compact, battery-operated transmitting and receiving radiotelephone that is carried like a knapsack and especially adapted for communication in the field.
- WATER SKIS:** Wide skis towed by a fast motorboat and ridden like a surfboard.
- WEEDICIDE:** Any weed killer, especially a chemical one, as 2,4-D.
- WELFARE STATE:** A state that, by its concern with public health, insurance against sickness and unemployment, and similar measures, assumes a large share of responsibility for the welfare of its citizens.
- WETBACK:** A person who enters the U. S. illegally from Mexico by wading or swimming the Rio Grande River.
- WHAMMY:** A curse or jinx (as, to put the *whammy* on a person).
- WITCH-HUNT:** A searching out of victims, especially liberals, professedly to expose them as disloyal or subversive, but actually to harass them for political reasons.

**WOOFER:** A loudspeaker, larger than a tweeter, that responds only to lower sound frequencies.

**ZOOT SUIT:** A suit of extreme cut, usually having a long jacket with broad shoulders, and high-waisted peg-top trousers.

## Words Frequently Misspelled

(Here spelled correctly)

abbreviate	annul	bleach	commissary	cyclone
abeyance	annulment	bonnet	commission	cygnet
abolition	anomaly	bouillon	committee	cylinder
abridge	anonymous	boundaries	commodore	cylindrical
abscess	answer	bouquet	comparable	
absence	antechamber	bourgeoisie	compatible	daffodil
absorption	antediluvian	brilliant	compel	dahlia
abstinence	antenna	browse	compelling	damage
abysmal	anticipate	bullion	complexion	dearth
abyss	antidote	bunion	compromise	debatable
accede	apologize	buoyancy	concede	debilitate
accelerate	apoplexy	bureaucracy	conceit	decadence
accessory	appalling	business	conceive	deceased
accidentally	apparatus		concomitant	deceitfully
acclaim	appreciation	cafeteria	concupiscence	deceive
accommodate	appurtenance	callously	concurrence	decision
accompaniment	argosy	calorie	condemn	defendant
accordance	argument	candidacy	condescension	deference
accredit	arraign	cantaloupe	connoisseur	defiant
accumulate	ascend	canteen	conscience	definitely
accuracy	ascension	capitalize	conscious	delegate
achieve	ascertain	captaincy	consecrate	delicacy
acknowledge	asinine	caress	consistent	demise
acoustic	aspirant	carillon	conspicuous	denouement
acquaintance	assassinate	carriage	conspiracy	descendant
acquiescent	assistance	carrot	constituency	desecrate
acquire	association	cartilage	constituent	desecrate
acquisitive	assurance	casualties	consulate	despair
acquit	attendance	ceiling	contaminate	desperate
acrimony	attenuate	cemetery	contemptible	despicable
across	attorney	chalet	contemptuous	despise
adaptation	audible	challenge	contentious	despondent
addition	audience	chamols	continually	detachable
address	autumn	champagne	controversy	deterrent
adept	auxiliary	changeable	convenient	development
adequacy	azalea	character	convalescent	diabetes
adolescence		chauffeur	convenient	diaphragm
adventitious	babyhood	chemise	convertible	dictionary
advocacy	bacchanalia	cherub	cooling	diesel
affable	bachelor	chicory	cordially	different
aggravate	baggage	chief	corollary	diffident
aggregate	banana	chilblain	correlate	dilapidated
aggressive	barbecue	chivalrous	counterfeit	dilatory
aghost	barbiturate	choosing	counterrevolution	dilemma
align	battalion	chronicle		dilettante
alleged	believe	chrysanthemum	courageous	diligent
allegiance	beneficiary	cipher	courteous	dimension
allotment	benefited	circuit	court-martial	dimity
all right	benign	circumstantial	creoscent	dining room
allure	bereave	civilize	critically	diphtheria
amateur	beseech	civilly	crochet	diplomacy
amenable	beverage	clumsily	croquet	disappear
analogous	bibliography	coarsen	cruelty	disappoint
analysis	bicycle	cocoa	cunning	disapprove
annals	biennial	codicil	curriculum	disastrous
annihilate	bigoted	column	custodian	discern
annually	bilious	coming	customary	discipline
annuity	blasphemous	commencement		disconsolate

discrepancy	equally	gauze	indefatigable	legendary
discretion	equipped	genealogy	indefeasible	legitimate
disdain	erratic	genre	indefensible	leisure
disillusion	especially	ghastly	indelible	leprosy
disinter	ethereal	gibber	independence	lettuce
disparage	evanescent	giblets	indict	liable
disperse	eventually	gingham	indigenous	librarian
dissatisfaction	evidently	gizzard	indiscriminate	ligament
dissemble	evilly	globule	indispensable	likelihood
dissenter	exaggerate	government	individuality	limousine
dissimilar	exasperate	gradient	indivisible	liquor
dissipate	exceed	grammar	inexhaustible	litany
dissolve	excel	grateful	infallible	livelihood
distention	excellent	gratitude	influential	loathe
divine	exception	grievous	inimical	loneliness
dizziness	excerpt	grimace	innate	lonely
dizzy	excess	gruesome	innocuous	loosely
dogged	excessive	guaranteed	inoculate	lunacy
domain	excise	guidance	insensate	luscious
domicile	excitement		inseparable	
dormitory	excrecence	haggle	insistence	mackerel
dotage	execrable	hallucination	intellectually	mackintosh
doughnut	exhaust	handkerchief	intercede	maddening
dour	exhibit	harass	interpret	maggot
duly	exhilarate	harness	interracial	maintenance
dutiable	exhort	heifer	interrupt	malaria
dutiful	exhume	height	intimidate	manacle
	existence	heresy	introvert	maniacal
earnest	exorbitant	hideous	irreconcilable	manufacturer
eavesdropper	expedient	historically	irrefutable	marmalade
ebony	experience	hoary	irresistible	massacre
eccentric	extension	homogeneous	irrespective	mayonnaise
echoes	extenuate	horoscope	irreverent	measles
echoing	extinguish	hygiene	irrigate	mediocre
ecstasy	extraordinary	hypnotic	isosceles	mediocrity
edible	extravagant	hypocrisy		mellifuous
editor	exuberant	hypocrite	jaundice	metamorphosis
effervescent	exultant	hypocritical	jealousy	meteorology
efficiency		hysterically	jeopardy	millionaire
effigy	fallacy		jockey	mimicking
effusive	fallible	idiocy	jollity	mimicry
egress	fascinate	idiosyncrasy	journeyman	miniature
elder down	fiery	idolatrous	joviality	miscellaneous
eighth	filament	illegitimacy	jovially	mischievous
elegy	financier	illegitimate	jugular	misspell
elementary	fissure	illiterate		moccasin
eligible	flaccid	illogical	kaleidoscope	mortgage
eliminate	fluorescent	imaginary	khaki	mountaineer
emanate	forcible	imbecile	kiln	mountainous
embarrassment	foreboding	imitate	kimono	mulatto
emigrant	foresee	immaculate	kindergarten	murmur
eminent	forsythia	immeasurable	knead	mysterious
emphatically	fracas	immediately	knowledge	
emulate	fragility	immorality		naphtha
enable	friar	immune		narcissus
encourage	friend	impeccable	laboratory	nascent
endear	frivolous	impertinent	labyrinth	naturally
endorse	fugue	implement	lacquer	nausea
energetic	fulsome	improve	ladle	nauseous
enervate	functionary	incensed	ladylike	necessarily
ennoble	fundamentally	incessantly	language	necessitate
entail		incidentally	laryngeal	niece
enumerate	gabardine	incise	larynx	niggardly
enunciation	gagged	incongruous	lascivious	ninth
enviable	gamut	incorruptible	latitude	noncombatant
environment	garrulity	incredible	lattice	noticeable
equalize	gaseous	indebted	leaven	notoriety
			legacy	



obedience	pompous	referable	sanitarium	succeed
obeisance	pontiff	referee	sassafras	success
obligate	pontificate	reference	scandalous	succor
obscene	portrait	referendum	scenario	sufferance
obsession	possessive	refraction	scentless	superintendent
obstacle	possibility	rehearsal	schedule	supervise
obstinate	potatoes	relevant	schism	supplement
occasion	practicability	religious	scintillate	suppress
occurrence	precede	reminiscence	scourge	surfeit
oddy	precedence	renaissance	scurrilous	surfeited
offensive	precedent	renounce	scythe	surprise
official	precocious	renown	secede	surveillance
ominous	predecessor	renunciation	sedentary	susceptible
omission	preferable	repellent	seesaw	syllable
oneself	prejudice	repercussion	segregate	symbolically
operator	presence	repertory	seize	symmetrical
opportunity	presumptuous	repetitious	self-reliant	symmetry
opposite	prevalent	reprieve	sensitive	syphilis
optimist	primeval	rescind	sensual	systematically
origin	privilege	resemblance	sententious	
oscillate	probably	reservation	separate	taffeta
ostentatious	proceed	reservoir	serviceable	talisman
outrageous	professor	residual	severely	tariff
oxidize	promenade	resilient	shellacking	tattooing
	pronunciation	resistance	shield	technicality
palatable	propaganda	resonance	shriek	temperament
pamphlet	propeller	respectively	siege	temperature
panacea	protein	respite	sieve	tempestuous
pantomime	pseudonym	responsible	significance	temporary
parallel	psychoanalysis	restaurant	similar	tenacious
parliamentary	psychology	resurrect	sirocco	tendon
paroled	ptomaine	retallate	skein	tenement
parricide	publicly	retina	skillet	tension
participle	pursuit	retrieve	sleigh ride	tentacle
particularly	pyramid	veille	sleight of hand	testament
pastime		revelation	slimy	theirs
patience	quadruped	reverence	slovenly	thief
pavilion	quandary	reversible	sluggish	thoroughfare
pedant	quarantine	revolution	sluice	thousandth
pedestal	quarrelsome	rhapsody	smorgasbord	threshold
penicillin	quay	rhetorically	so-called	thunderous
perceive	querulous	rheumatic	soccer	tidiness
perennial	queue	rhinestone	solder	timorous
peripatetic	quixotic	rhinoceros	solecism	tinseley
permissible	quizzes	rhododendron	soluble	titillation
perseverance	quizzical	rhythm	solvable	tobacco
persistent		rickety	somersault	toboggan
personality	racketeer	ridiculous	sophisticated	tolerant
personnel	ragamuffin	righteous	souvenir	tomatoes
perspiration	rallery	riotous	spacious	tonsillectomy
persuade	rapidity	river	spatial	tonsillitis
physician	ravenous	rueful	specimen	toque
pianos	realize	rummage	spigot	torrential
picnic	really	runaway	sponsor	tortoise
picnicking	rebus	rutabaga	squalid	tournament
piecemeal	recalcitrant		squalor	tourniquet
pierce	recede	sabotage	stabbing	trachea
pigsty	receipt	sachet	staccato	tradition
pilgrimage	receive	sacrament	statue	trafficking
pillory	recipe	sacritical	stolcally	tragically
pinlon	recipient	sacrilege	straightway	transcendent
piteous	recognition	sacrilegious	strait-laced	transept
playwright	recollect	sadism	stubbornness	transient
plebiscite	recommend	saffron	subsidize	transparency
pneumatic	recoup	sallent	substantial	transubstantia-
pneumonia	recruit	sanatorium	subtle	tion
	redolent	sanctuary	subtlety	trauma
				tread

trek	tyrannical	untenable	virile	whooping cough
tremendous	tyranny	unwieldy	virtual	whore
trepidation	tyrant	upbraid	visibility	wield
tributary		usually	visionary	withhold
tricycle	ukulele	utensil	vitality	witticism
triennial	ulcerous	utilize	vitaly	wizard
trollop	ultimate	utopia	voluminous	wondrous
trough	unadulterated		voluntarily	wooling
trousseau	unalloyed	vaccinate		worried
truant	unanimous	vacillate	warrior	worrying
truism	uncomplimen-	vacuum	weakling	wrapper
truly	tary	valet	weasel	wreak
tuberculosis	unconscionable	vanilla	weather vane	wrestle
tumultuous	unctuous	vegetable	weighing	
turpentine	undoubtedly	vehicle	weird	yacht
tussle	unexceptionable	venereal	welcome	yield
tweezers	unguent	vengeance	whalebone	
tycoon	unparalleled	vermillion	whedle	zealous
typhoon	unprecedented	vigilance	whimsical	zoology
typical	unpredictable	villify	whirl	zwieback
typify	unrequited	villain	wholly	

## Forms of Address

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**Abbot.** Address: The Right Reverend \_\_\_\_\_, Abbot of \_\_\_\_\_. Begin: Right Reverend and dear Father.

**Alderman.** Address: Honorable \_\_\_\_\_. Begin: Dear Sir.

**Ambassador.** Address: His Excellency, \_\_\_\_\_, Ambassador of \_\_\_\_\_ at \_\_\_\_\_. Begin: Sir; or Excellency.

**Ambassador and his wife.** Address: His Excellency, The \_\_\_\_\_ Ambassador and Mrs. \_\_\_\_\_. Begin: Your Excellencies.

**Archbishop (Anglican).** Address: The Most Reverend His Grace the Lord Archbishop of \_\_\_\_\_. Begin: My Lord Archbishop; or Your Grace.

**Archbishop (Roman Catholic).** Address: The Most Reverend \_\_\_\_\_, D.D., Archbishop of \_\_\_\_\_. Begin: Your Excellency.

**Archdeacon.** Address: The Venerable The Archdeacon of \_\_\_\_\_. Begin: Venerable Sir.

**Army Officers.** Address: The Commander in Chief, Army of the U. S.; or (use officer's rank) \_\_\_\_\_, U.S.A. Begin: Sir; or My dear General \_\_\_\_\_.

**Assemblyman.** Address: The Honorable \_\_\_\_\_, Member of Assembly; or Assemblyman \_\_\_\_\_. Begin: Sir; or My dear Mr. \_\_\_\_\_.

**Assistant Secretary (Assistant to a Cabinet Officer).** Address: Honorable \_\_\_\_\_, Assistant Secretary of \_\_\_\_\_. Begin: Sir; or Dear Mr. \_\_\_\_\_.

**Associate Justice.** Address: The Honorable \_\_\_\_\_, United States Supreme Court; or Mr. Justice \_\_\_\_\_, The Supreme Court. Begin: Mr. Justice; or Dear Justice.

**Baron.** Address: The Right Honourable Lord \_\_\_\_\_; or The Lord \_\_\_\_\_. Begin: My Lord.

**Baroness.** Address: The Right Honourable the Baroness \_\_\_\_\_; or The Lady \_\_\_\_\_. Begin: Madam.

**Baronet.** Address: Sir John \_\_\_\_\_. Bt. or Bart. Begin: Sir.

Baronet's wife. See Lady, below.

Baron's wife. See Baroness, above.

**Bishop (Anglican).** Address: The Right Reverend the Lord Bishop of \_\_\_\_\_. Begin: My Lord Bishop; or My Lord.

**Bishop (Methodist).** Address: Reverend Bishop \_\_\_\_\_. Begin: Dear Sir; or My dear Bishop \_\_\_\_\_.

**Bishop (Protestant Episcopal).** Address: To the Right Reverend \_\_\_\_\_, Bishop of \_\_\_\_\_. Begin: Right Reverend and Dear Sir; or Dear Bishop \_\_\_\_\_.

**Bishop (Roman Catholic).** Address: The Most Reverend \_\_\_\_\_, Bishop of \_\_\_\_\_. Begin: Your Excellency; or Most Reverend Sir.

**Cabinet Officers (U. S.).** Address: The Honorable the Secretary of State (or Labor, etc.); The Secretary of State, etc. Begin: Sir; or My dear Mr. Secretary.

**Canon.** Address: The Very Reverend Canon \_\_\_\_\_; or The Very Reverend \_\_\_\_\_, Canon of \_\_\_\_\_. Begin: Very Reverend Canon; or Dear Canon \_\_\_\_\_.

**Cardinal.** Address: His Eminence John, Cardinal \_\_\_\_\_. Begin: Your Eminence.

**Cardinal (if also an Archbishop).** Address: His Eminence \_\_\_\_\_, Cardinal \_\_\_\_\_, Archbishop of \_\_\_\_\_. Begin: Your Eminence.

**Chargé d'Affaires.** Address: The Chargé d'Affaires of \_\_\_\_\_. Begin: Dear Sir; or My dear Mr. \_\_\_\_\_.

**Chief Justice of the U. S.** Address: The Chief Justice of the U. S.; or The Chief Justice, The Supreme Court, Washington, D. C. Begin: My dear Mr. Chief Justice; or Sir.

**Clergyman. Address:** The Reverend \_\_\_\_\_; or (if doctor of divinity) The Rev. Dr. \_\_\_\_\_. *Begin:* Dear Sir; or Reverend Sir.

**Clerk of Senate or House. Address:** The Honorable \_\_\_\_\_, Clerk of \_\_\_\_\_. *Begin:* Sir; or Dear Sir.

**Commissioner of Bureau. Address:** The Honorable \_\_\_\_\_, Commissioner of the Bureau of \_\_\_\_\_. *Begin:* Sir; or Dear Sir.

**Congressman. Address:** Honorable James H. Smith, House of Representatives. *Begin:* Sir; or Dear Sir.

**Consul. Address:** To the American Consul at \_\_\_\_\_; or \_\_\_\_\_, Esq., American Consul at \_\_\_\_\_. *Begin:* Dear Sir.

**Countess. Address:** To the Right Honourable The Countess of \_\_\_\_\_. *Begin:* Madam.

**Dame. Address:** Dame \_\_\_\_\_. *Begin:* Madam.

**Deacon. (Anglican and Protestant Episcopal). Address:** The Reverend Deacon \_\_\_\_\_. *Begin:* Reverend Sir.

**Dean (Ecclesiastic). Address:** The Very Reverend the Dean of \_\_\_\_\_. *Begin:* Very Reverend Sir; or Sir.

**Dean, Rural (Roman Catholic Church). Address:** The Very Reverend \_\_\_\_\_, R.D., or V.F. *Begin:* Very Reverend Father.

**Dean of a College or Graduate School. Address:** Dean \_\_\_\_\_. *Begin:* Dear Sir; or Dear Dean \_\_\_\_\_.

**Divorced woman. Address:** Ordinarily use the maiden name with Mrs. Some divorced women prefer to resume the Miss.

**Doctor of Divinity. Address:** \_\_\_\_\_, D.D.; or Rev. Dr. \_\_\_\_\_. *Begin:* Dear Sir; or Dear Dr. \_\_\_\_\_.

**Doctor of Philosophy, Laws, Medicine, etc. Address:** \_\_\_\_\_, Ph.D. (LL.D.) (M.D.); or Dr. \_\_\_\_\_. *Begin:* Dear Sir; or Dear Dr. \_\_\_\_\_.

**Dowager. See Widow, below.**

**Duchess. Address:** Her Grace the Duchess of \_\_\_\_\_; or The Most Noble the Duchess of \_\_\_\_\_. *Begin:* Madam; or Your Grace.

**Duchess of the Blood Royal. Address:** Her Royal Highness The Duchess of \_\_\_\_\_. *Begin:* Madam; or May it please your Royal Highness.

**Duke. Address:** His Grace the Duke of \_\_\_\_\_; or The Most Noble the Duke of \_\_\_\_\_. *Begin:* My Lord Duke; or Your Grace.

**Duke of the Blood Royal. Address:** His Royal Highness The Duke of \_\_\_\_\_. *Begin:* Sir; or May it please your Royal Highness.

**Earl. Address:** The Right Honourable The Earl of \_\_\_\_\_; or The Earl of \_\_\_\_\_. *Begin:* My Lord.

**Earl's wife. See Countess, above.**

**Envoy. Same as Minister (Diplomatic).**

**Esquire. Address:** \_\_\_\_\_, Esq. *Begin:* Sir; or Dear Mr. \_\_\_\_\_. (Note.—Esq. is never used if the person is addressed by any other title, even Mr.)

**Governor. Address:** (In Mass. and by courtesy in some other states) His Excellency, The Governor of \_\_\_\_\_; or His Excellency \_\_\_\_\_; or (in other states of the U. S.) The Honorable the Governor of \_\_\_\_\_; or Hon. \_\_\_\_\_, Governor of \_\_\_\_\_. *Begin:* Sir; or Dear Sir.

**Governor-General of Canada. Address:** His Excellency The Right Honourable \_\_\_\_\_, (plus rank or title, if any). *Begin:* My Lord; or Sir.

**Governor-General's wife. Address:** Her Excellency \_\_\_\_\_. *Begin:* Madam.

**Judge (U.S.A.). Address:** The Honorable \_\_\_\_\_, U. S. District Judge. *Begin:* Dear Sir; or My dear Judge \_\_\_\_\_.

**King. Address:** The King's Most Excellent Majesty; or His Most Gracious Majesty, King \_\_\_\_\_. *Begin:* Sir; or May it please your Majesty.

**King's Counsel. Address:** To \_\_\_\_\_, Esq., K.C. *Begin:* Sir.

**Knight. Address:** Sir John \_\_\_\_\_ (initials of his order, if any, as K.C.B.). *Begin:* Sir.

**Knight's wife. See Lady, below.**

**Lady. Address:** Lady \_\_\_\_\_, or (if daughter of a baron or viscount) Hon. Lady \_\_\_\_\_; or (if the daughter of an earl, marquis, or duke) Lady Florence \_\_\_\_\_. *Begin:* Madam; or Your Ladyship.

**Lawyer. Address:** \_\_\_\_\_, Esq.; or Mr. \_\_\_\_\_, Attorney at Law. *Begin:* Dear Sir; or My dear Mr. \_\_\_\_\_.

**Lieutenant Governor. Address:** The Honorable \_\_\_\_\_, Lt. Governor of \_\_\_\_\_. *Begin:* Sir; or Dear Sir.

**Maid of Honor. Address:** The Honourable Miss \_\_\_\_\_. *Begin:* Madam.

**Marchioness. Address:** The Most Honourable the Marchioness of \_\_\_\_\_. *Begin:* Madam.

**Marquis. Address:** The Most Honourable the Marquis of \_\_\_\_\_; or The Marquis of \_\_\_\_\_. *Begin:* My Lord Marquis.

**Mayor (in Canadian cities and towns, and English boroughs). Address:** The Right Worshipful the Mayor of \_\_\_\_\_ (English); His Worship, The Mayor of \_\_\_\_\_ (Canadian). *Begin:* Sir.

**Mayor (in the U. S.). Address:** The Honorable \_\_\_\_\_, Mayor of \_\_\_\_\_; or The Mayor of the City of \_\_\_\_\_. *Begin:* Sir; or Dear Mr. Mayor.

**Member of Parliament (or of a Provincial Legislative Council or Legislature, etc.). To the ordinary form of address add M.P. (or M.P.P.; or M.L.A., etc.). *Begin:* Sir.**

**Minister (Diplomatic). Address:** The Honorable \_\_\_\_\_, Minister of \_\_\_\_\_. *Begin:* Sir; or My dear Mr. Minister.

**Minister (Religious). See Clergyman, above.**

**Moderator (Presbyterian Church). Address:** The Right Reverend \_\_\_\_\_. *Begin:* Right Reverend Sir.

**Monsignor. Address:** The Right Reverend Monsignor \_\_\_\_\_. *Begin:* Right Reverend and dear Monsignor.



**Mother Superior of a Sisterhood.** Address: The Reverend Mother Superior, Convent of \_\_\_\_\_; or Reverend Mother \_\_\_\_\_, O.S.D. (or other initials of the order). *Begin:* Reverend Mother; or Dear Madam.

**Naval Officers.** Address: The Admiral of the Navy of the U. S.; or Captain \_\_\_\_\_, U.S.N. *Begin:* Sir; or Dear Commander \_\_\_\_\_; but for officers below the rank of commander, Dear Mr. \_\_\_\_\_.

**Nun.** See *Sister of a Religious Order*, below.

**Papal Nuncio or Internuncio or Apostolic Delegate.** Address: His Excellency, The Papal Nuncio (or Internuncio or Apostolic Delegate) to \_\_\_\_\_. *Begin:* Your Excellency.

**Patriarch (Eastern Church).** Address: His Beatitude the Patriarch of \_\_\_\_\_; or His Beatitude the Lord \_\_\_\_\_, Patriarch of \_\_\_\_\_. *Begin:* Most Reverend Lord; or Your Beatitude.

**Pope.** Address: To His Holiness Pope \_\_\_\_\_. *Begin:* Most Holy Father; or Your Holiness.

**President of a College or University.** Address: \_\_\_\_\_, LL.D. (or if he is not an LL.D., use the initials of his highest degree), President of \_\_\_\_\_ University; or President, \_\_\_\_\_ University. If he is a clergyman, address as Reverend \_\_\_\_\_, LL.D., President of \_\_\_\_\_ University. *Begin:* Dear Sir; or Dear President \_\_\_\_\_.

**President of a Theological Seminary.** Address: The Rev. President \_\_\_\_\_. *Begin:* Dear Sir; or Dear President \_\_\_\_\_.

**President of State Senate.** Address: The Honorable \_\_\_\_\_, President of the Senate of \_\_\_\_\_. *Begin:* Sir.

**President of the Senate of the U. S.** Address: The Honorable, The President of the Senate of the U. S.; or The Honorable \_\_\_\_\_, President of the Senate. *Begin:* Sir.

**President of the U. S.** Address: The President, The White House; or His Excellency, The President of the U. S. *Begin:* Mr. President; or The President; or My dear Mr. President.

**Priest (Roman Catholic Church).** Address: Reverend \_\_\_\_\_, O.S.M. (or other initials of his order). *Begin:* Dear Father \_\_\_\_\_ (religious name).

**Prime Minister of Canada.** Address: The Right Honourable \_\_\_\_\_, P.C., Prime Minister of Canada. *Begin:* Sir.

**Prince of the Blood Royal.** Address: His Royal Highness Prince \_\_\_\_\_. *Begin:* Sir.

**Prince of Wales.** Address: His Royal Highness The Prince of Wales. *Begin:* Sir; or May it please your Royal Highness.

**Princess of the Blood Royal.** Address: Her Royal Highness the Princess \_\_\_\_\_ (Christian name). *Begin:* Madam.

**Privy Councillor (British Imperial).** Address: To the Right Honourable \_\_\_\_\_, P.C. *Begin:* Sir. Note.—If other titles are used, they should come after *The Right Honourable*; as, The Right Honourable Sir John \_\_\_\_\_.

**Privy Councillor (of Canada).** Address: The Honourable \_\_\_\_\_. *Begin:* Sir.

**Professor in a College or University.** Address: Professor \_\_\_\_\_; or \_\_\_\_\_, Ph.D. (or LL.D., M.D., etc., using only the initials of his highest degree, if the degrees are in the same field), Professor of \_\_\_\_\_. *Begin:* Dear Sir; or My dear Professor.

**Professor in a Theological Seminary.** Address: The Reverend Professor \_\_\_\_\_. *Begin:* Dear Sir; or Dear Professor \_\_\_\_\_.  
or The Rev. \_\_\_\_\_, D.D. *Begin:* Dear Sir; or Dear Professor \_\_\_\_\_.

**Queen.** Address: The Queen's Most Excellent Majesty; or Her Gracious Majesty, The Queen. *Begin:* Madam; or May it please your Majesty.

**Queen Mother.** Address: Her Gracious Majesty Queen \_\_\_\_\_. *Begin:* Madam; or May it please your Majesty.

**Rabbi.** Address: Rabbi \_\_\_\_\_.  
The Rev. \_\_\_\_\_. *Begin:* Reverend Sir; or My dear Rabbi \_\_\_\_\_. (If he holds a doctor's degree, Dr. may be substituted for Rabbi.)

**Rector of a Religious House or of a Seminary.** Address: The Very Reverend \_\_\_\_\_, O.S.B. (or other initials of order).  
Rector, Brothers of St. Francis. *Begin:* Very Reverend and dear Father (or Brother).

**Representative.** See *Congressman*, above.

**Senator (U. S.)** Address: The Honorable \_\_\_\_\_, the U. S. Senate, Washington, D. C. *Begin:* Dear Sir; or My dear Senator.

**Sister of a Religious Order.** Address: Sister \_\_\_\_\_, (followed by the initials of the order). *Begin:* Dear Sister; or My dear Sister \_\_\_\_\_.

**Speaker of the House of Commons (Canada).** Address: The Honourable \_\_\_\_\_, The Speaker of the House of Commons. *Begin:* Dear Mr. Speaker.

**Speaker of the House of Representatives of the U. S.** Address: The Honorable \_\_\_\_\_, Speaker of the House of Representatives. *Begin:* Sir; or My dear Mr. Speaker.

**State Senator.** Like Senator (U. S.).

**Undersecretary of State (U.S.A.).** Address: The Undersecretary of State; or The Honorable \_\_\_\_\_, Undersecretary of State. *Begin:* Sir; or Dear Mr. \_\_\_\_\_.

**Vice-President.** Address: The Vice-President; or The Honorable \_\_\_\_\_, Vice-President of the U. S. *Begin:* Mr. Vice-President; or Sir.

**Viscount.** Address: The Right Honourable the Viscount \_\_\_\_\_.  
or The Viscount \_\_\_\_\_. *Begin:* My Lord.

**Viscountess.** Address: The Right Honourable the Viscountess \_\_\_\_\_.  
or The Viscountess \_\_\_\_\_. *Begin:* Madam.

**Widow.** Address: Ordinarily address by her former title; as, Mrs. John Smith, not Mrs. Mary Alice Smith, unless the latter form is preferred by the person herself.

# HEADLINE HISTORY OF OUR TIMES

Based on Newspaper Accounts of Important Events



- 1917**  
*Mar. 8*—Russian Revolution begins.  
*Mar. 15*—Tsar Nicholas II abdicates.  
*Apr. 6*—U. S. enters World War I.  
*Apr. 16*—Lenin and other exiled Bolshevik leaders arrive in Petrograd from Switzerland; were allowed to pass through Germany in sealed railroad car.  
*Nov. 6-7*—Bolsheviks overthrow Keren-sky, seize power.
- 1918**  
*Jan. 8*—Wilson's 14-point address to Congress calls for self-determination, removal of economic barriers, League of Nations.  
*Mar. 3*—Russia makes separate treaty with Central Powers at Brest-Litovsk.  
*July 16*—Tsar Nicholas II and family shot.  
*Nov. 11*—World War I ends.
- 1919**  
*Mar. 2*—3rd International founded.  
*June 28*—Versailles Treaty signed.  
*Aug. 11*—Germany becomes republic as Weimar Constitution is promulgated.
- 1920**  
*Jan. 10*—League of Nations officially inaugurated as Versailles Treaty goes into effect.  
*Jan. 16*—1st League Council meeting in Paris. Permanent members: England, France, Italy, Japan. (Germany made permanent member 1926 upon admission to League; Russia, 1934.)  
*Jan. 16*—Prohibition goes into effect.  
*Mar. 13-17*—Kapp Putsch by monarchists results in brief seizure of Berlin government buildings; collapses as result of general strike.  
*Mar. 19*—Senate finally rejects Treaty of Versailles because of League of Nations proviso.  
*Apr. 25*—War between Russia and Poland begins. Treaty of Riga, Mar. 18, 1921, establishes Polish-Russian border.  
*May 19*—Persia (now Iran) presents 1st dispute to League; demands Russia get out of Azerbaijan. Russia does.
- Aug. 26*—Woman suffrage amendment ratified.
- 1921**  
*Mar. 8*—Allies occupy Düsseldorf, Duisburg, Ruhrort because of reparations default; Germany accepts ultimatum, finances reparations May 11.  
*Mar. 17*—New Economic Policy (NEP) in Russia permits private enterprise on small scale; small private farms, limited hired labor and leases permitted 1922.
- 1922**  
*Feb. 6*—Washington Conference guarantees China's integrity in 9-Power Treaty; establishes naval ratios of 5:5:3 for U. S., Britain and Japan.  
*Apr. 16*—Treaty of Rapallo provides for economic co-operation between Germany and Russia.  
*June 15*—1st meeting of Permanent Court of International Justice (World Court).  
*Sept. 21*—Fordney-McCumber Tariff sets highest rates in American history.  
*Oct. 27*—Mussolini marches on Rome.
- 1923**  
*Jan. 11*—French and Belgians occupy Ruhr because of reparations default.  
*Aug. 31*—Italy, blaming Greece for death of Italian on Greek border, seizes Corfu; League intervenes; Italy withdraws; Greece to pay indemnity.  
*Nov. 8-9*—Munich beer hall putsch led by Hitler put down; Hitler sentenced to 5 years, serves less than 1; writes *Mein Kampf* in jail.  
*Nov. 20*—German mark falls to 4.2 trillion to dollar.
- 1924**  
*Jan. 21*—Lenin dies; struggle for power begins between Stalin and Trotsky.  
*Apr. 9*—Dawes Plan reorganizes Reichsbank, revises reparations and lends Germany gold to back up currency.  
*May 26*—Immigration quotas set: annual immigrants from each nation to be 2% of persons of that nationality residing in U. S. in 1890.  
*July 21*—Leopold and Loeb sentenced to life imprisonment for kidnap-slaying of 14-year-old boy.

## 1925

*Apr. 26*—Hindenburg elected President of Germany by minority vote.

*July 10-21*—Scopes evolution trial held in Dayton, Tenn.

*Oct.*—Locarno Conference held to insure peace, preserve boundaries.

## 1927

*May 20-21*—Lindbergh flies solo across Atlantic.

*Aug. 23*—Sacco and Vanzetti executed.

*Nov.*—Trotsky expelled from Communist party.

## 1928

*Aug. 27*—Kellogg-Briand Pact signed; 15 nations (eventually 62) outlaw war; ratified by Senate Jan. 15, 1929.

*Oct. 1*—Russia's 1st 5-Year Plan begins.

## 1929

*June 7*—Young Plan establishes Bank for International Settlements; reduces reparations.

*Oct. 24*—Worst stock crash wipes out thousands of accounts.

## 1930

*Apr. 22*—London naval pact signed by U. S., Britain, France, Italy, Japan; Japan benefits by revision of naval ratio.

## 1931

*Apr. 14*—Alfonso XIII quits Spain; Alcalá Zamora becomes President of provisional republic.

*May 11*—Austrian Credit Anstalt falls; 6,000,000 unemployed by 1932.

*Sept. 18-19*—Explosion on Manchurian railway serves as pretext for Japan to begin occupation of Manchuria.

## 1932

*Jan. 7*—Stimson Doctrine: U. S. will not recognize gains achieved by armed force; recognition of Manchukuo withheld.

*Jan. 22*—Reconstruction Finance Corporation (RFC) established.

*Jan. 28*—Japan begins invasion of international settlement of Shanghai.

*June 7*—Bonus March on Washington, D. C.

*July 31*—Nazis elect 230 to Reichstag, Socialists 133, Centrists 97, Communists 89.

*Aug. 13*—Hitler refuses Vice-Chancellorship; demands all or nothing.

*Oct. 31*—Hoover warns "grass will grow in streets" under New Deal.

*Nov. 6*—German election fails to break deadlock; Nazis lose 2,000,000 votes.

## 1933

*Jan. 30*—Hitler made Chancellor of Germany by Hindenburg.

*Feb. 15*—FDR misses assassination at Miami; Mayor Cermak of Chicago fatally wounded.

*Feb. 27*—German Reichstag building burns; Communists accused.

*Mar. 5*—Reichstag elections give Nazis and Nationalist allies 52% of vote.

*Mar. 6*—Roosevelt proclaims bank holiday; embargoes gold.

*Mar. 12*—FDR's first "Fireside Chat."

*Mar. 23*—Reichstag gives Hitler blanket powers for 4 years; 94 Social Democrats opposed; many Social Democrats and all Communists under arrest or in hiding.

*Mar. 27*—Japan gives notice of quitting League (effective 1935).

*Mar. 28*—Nazis begins systematic boycott of Jewish businessmen, doctors, lawyers.

*Mar. 31*—Civilian Conservation Corps (CCC) to relieve unemployment and aid reforestation and flood control.

*Apr. 19*—U. S. goes off gold standard.

*May 18*—Tennessee Valley Authority (TVA) established.

*June 12-July 27*—London Economic Conference attempts to stabilize currencies; defeated by FDR's opposition.

*June 16*—National Industrial Recovery Act (NIRA) signed. Declared unconstitutional May 27, 1935.

*Oct. 14*—Hitler's Germany gives notice of quitting League (effective 1935).

*Oct. 17*—Einstein arrives in U. S. from Germany.

*Nov. 12*—92% of all voters cast ballots for Nazis in 1-party election; 3,000,000 invalid ballots register opposition.

*Nov. 16*—U. S. and Russia resume full relations at 11:50 P.M. EST.

*Dec. 5*—Prohibition ends in U. S.

## 1934

*Jan. 10*—Van der Lubbe, Dutch Communist, beheaded for Reichstag fire.

*Jan. 31*—Gold value of U. S. dollar cut to \$.5906.

*Mar. 24*—FDR signs Tydings-McDuffie Act giving Philippines independence on July 4, 1946.

*May 28*—Dionne quintuplets born.

*June 6*—Securities and Exchange Act signed; regulates licensing of stock exchanges and speculative practices.

*June 12*—Reciprocal Trade Agreements Act signed; allows President limited trade-agreement authority without need for Senatorial approval.

*June 19*—Federal Communications Commission (FCC) created to regu-



- late interstate telegraph, telephone, cable and radio.
- June 28**—Federal Housing Administration (FHA) to aid in modernizing homes and in new construction.
- June 30**—Hitler "purge" kills Ernst Roehm and other Nazi leaders.
- Aug. 2**—Hindenburg dies; Hitler becomes absolute dictator of Germany.
- 1935**
- Jan. 4**—Roosevelt asks 3.5 million jobs in public works (PWA) to end dole.
- Jan. 13**—Saar plebiscite 90% for reunion with Germany; Saar returned to Germany Mar. 1.
- Mar. 6**—22.375 million on relief rolls.
- Mar. 16**—Hitler defies Versailles Treaty by re-establishing universal military training in Germany.
- July 5**—Wagner-Connelly Act establishes National Labor Relations Board (NLRB). Upheld by Supreme Court Apr. 12, 1937.
- Aug. 14**—Social Security Act signed; establishes old-age benefits and unemployment insurance. Upheld by Supreme Court May 24, 1937.
- Aug. 20**—3rd International decides Russia will side with democracies against Fascist states.
- Aug. 31**—Neutrality Act, resulting from Ethiopian crisis, requires President to ban arms sales to nations he declares at war.
- Sept. 10**—Huey Long dies from being shot Sept. 8.
- Sept. 15**—Nuremberg laws deprive Jews of citizenship and bar intermarriage.
- Oct. 3**—Italy invades Ethiopia.
- Oct. 7**—League of Nations condemns Italy.
- Nov. 9**—Committee for Industrial Organization, headed by John L. Lewis, organized within AFL; expelled in 1937; becomes Congress of Industrial Organizations (CIO) in Nov. 1938.
- Nov. 18**—League economic and financial sanctions against Italy go into effect. (Embargo on oil never applied.)
- 1936**
- Jan. 15**—Japan withdraws from naval conference at London; U. S., France, Britain sign pact Mar. 25.
- Jan. 20**—George V dies; Prince of Wales becomes Edward VIII.
- Feb. 16**—Spanish Popular Front (republicans and leftists) wins parliamentary elections.
- Mar. 7**—Hitler sends German troops into Rhineland, defying Versailles Treaty; denounces Locarno Pact.
- Apr. 3**—Bruno Richard Hauptmann electrocuted for kidnap-slaying (Mar. 1, 1932) of Lindbergh baby.
- May 9**—Ethiopia annexed to Italy.
- July 17**—Spanish civil war begins; troops led by Gen. Francisco Franco revolt in Spanish Morocco; uprisings follow all over Spain.
- Aug. 19-25**—Zinoviev and Kamenev executed in Russia as collaborators with Trotsky and Nazi secret police.
- Oct. 1**—Franco named Chief of State by rebels; establishes capital at Burgos.
- Oct. 27**—Rome-Berlin Axis formed.
- Nov. 18**—Italy and Germany recognize Franco regime in Spain.
- Nov. 25**—Japan signs anti-Comintern treaty with Germany; Italy adheres Nov. 6, 1937.
- Dec. 1-23**—Buenos Aires conference: 21 American republics pledge to consult if peace is imperiled; no nation to interfere with another's domestic affairs.
- Dec. 11**—Edward VIII abdicates; his brother becomes George VI.
- 1937**
- Jan. 20**—FDR second inaugural sees "one-third of the nation ill-housed, ill-clad, ill-nourished."
- Feb. 2**—Sit-down strikers at Flint, Mich., defy court order telling them to evacuate.
- Feb. 5**—FDR asks power to enlarge Supreme Court to maximum of 15 Justices; plan defeated by Senate July 22.
- May 1**—Neutrality Act further limits sales to belligerents.
- May 6**—German zeppelin Hindenburg burns at Lakehurst, N. J.
- May 28**—Chamberlain succeeds Baldwin as British Prime Minister.
- June 3**—Duke of Windsor (former Edward VIII of Britain) weds Wallis Warfield Simpson.
- June 12**—Marshal Tukhachevsky and 7 generals executed in Russia for espionage and high treason.
- July 2**—Amelia Earhart Putnam missing in Pacific in round-the-world flight.
- July 7**—Japan begins undeclared war on China; fighting continues throughout World War II until fall of Japan.
- Oct. 5**—FDR delivers speech calling for "quarantine" of aggressors.
- Nov. 29**—Britain and France agree to give Hitler colonies in exchange for peace.
- Dec. 11**—Italy gives notice of quitting League (effective 1939).
- 1938**
- Feb. 16**—New Agricultural Adjustment Act signed; establishes parity payments, ever-normal granaries, crop insurance.

- Feb. 20**—Eden resigns as British Foreign Minister; charges Chamberlain "seeks to buy peace."
- Mar. 12**—Nazis seize Austrian government; Schuschnigg ousted.
- June 25**—Fair Labor Standards Act provides 40¢ minimum wage and 40-hour week, to be achieved within 8 and 3 years, respectively.
- July 18**—Douglas Corrigan lands in Dublin in "wrong way" flight.
- Sept. 29-30**—Britain, France, Italy, Germany in parley at Munich agree to dismemberment of Czechoslovakia; Chamberlain returns to London with "peace in our time."
- Oct. 30**—"Attack from Mars" radio program by Orson Welles causes panic.
- Nov. 13**—Mother Cabrini first American to be beatified by Vatican.
- Nov. 13**—Jews herded into camps; fined \$400,000,000 because of Vom Rath assassination.
- 1939**
- Feb. 27**—Sit-down strikes outlawed by U. S. Supreme Court.
- Mar. 15**—Hitler enters Prague.
- Mar. 28**—Madrid surrenders to Franco Forces.
- Apr. 1**—Civil war ends in Spain; U. S. recognizes Franco government.
- Apr. 28**—Hitler rebuffs FDR's peace plea in Polish quarrel.
- Apr. 30**—New York World's Fair opens.
- May 3**—Litvinov retires as Commissar for Foreign Affairs, marking end of Western orientation in Soviet diplomacy; Vyacheslav M. Molotov succeeds him.
- May 5**—Poland refuses to yield Danzig to Hitler; offers to negotiate.
- Aug. 24**—Germany and Russia sign 10-year nonaggression pact.
- Aug. 27**—Hitler demands Danzig and Corridor; agrees Aug. 29 to negotiate; asks for Polish delegation; considers plan rejected Aug. 31 when no Polish delegate appears; publishes 16-point peace plan, which Poland rejects.
- Sept. 1**—Germany invades Poland and annexes Danzig; Britain and France give Hitler ultimatum.
- Sept. 3**—Britain and France declare war.
- Sept. 5**—U. S. proclaims neutrality.
- Sept. 17**—Russia invades Poland.
- Sept. 18**—Nazi and Russian armies meet at Brest-Litovsk, Poland.
- Sept. 28**—Poland partitioned by Germany and Russia.
- Nov. 4**—FDR signs bill removing arms embargo; substitutes "cash and carry" trade with belligerents.
- Nov. 30**—Russia attacks Finland.
- Dec. 14**—Soviet Russia expelled from League for invading Finland.
- Dec. 17**—Admiral Graf Spee scuttled at Montevideo by Hitler order after fleeing British warships.
- 1940**
- Mar. 12**—Finland surrenders.
- Apr. 9**—Nazis invade Denmark and Norway.
- May 10**—Nazis invade Netherlands, Belgium, Luxembourg.
- May 10**—Chamberlain resigns as Prime Minister; Churchill takes over.
- May 12**—Germans cross French frontier.
- May 13**—Churchill tells Britain he has "nothing to offer but blood, toil, tears and sweat."
- May 14**—Dutch surrender.
- May 16**—FDR asks \$1.8 billion for defense, 50,000 planes.
- May 26-June 3**—Dunkirk evacuation of about 335,000 out of 400,000 Allied soldiers rescued from Belgium by civilian and naval craft from Britain.
- May 28**—King Leopold surrenders Belgian army; Cabinet disowns him.
- May 28**—Council of National Defense established to co-ordinate industry, transportation, finance and labor.
- June 9**—Norway surrenders.
- June 10**—Italy declares war on France and Britain; invades France.
- June 14**—Germans enter Paris; city undefended.
- June 15**—Russia seizes Lithuania, seizes Latvia and Estonia June 17.
- June 16**—Pétain government formed in Bordeaux; moved to Vichy July 2.
- June 22**—France and Germany sign armistice at Compiègne.
- June 23**—De Gaulle forms French National Comm. in London; announces French will carry on war.
- Aug. 8**—German Luftwaffe launches all-out attack on England.
- Aug. 21**—Trotsky assassinated in Mexico City.
- Sept. 3**—U. S. trades 50 over-age destroyers to Britain in return for right to lease sites for 8 naval bases in British possessions.
- Sept. 16**—Selective Service Bill signed, over 16,000,000 register Oct. 16.
- Oct. 27**—New York World's Fair closes 45 million paid admissions in 2 years.
- Oct. 28**—Italy invades Greece.
- Nov. 14**—Nazis bomb Coventry.
- Dec. 29**—FDR calls for all aid to Britain short of war; declares U. S. "Arsenal of Democracy."
- 1941**
- Mar. 11**—FDR signs Lend-Lease Bill.
- Apr. 13**—Russia and Japan sign 5-year neutrality pact.

**Apr. 17**—Yugoslavia surrenders; Gen. Mikhailović continues guerrilla warfare; Tito leads left-wing guerrillas.

**Apr. 27**—Nazi tanks enter Athens; remnants of British army quit Greece.

**May 10**—Rudolf Hess, Nazi Deputy Führer, lands in Scotland by plane.

**May 24**—HMS Hood, largest British warship, sunk by Nazi battleship *Bismarck*; *Bismarck* sunk by British naval and air attack May 27.

**June 22**—Hitler attacks Russia.

**June 24**—U. S. pledges all possible aid to U.S.S.R.

**July 25**—FDR freezes Japanese assets in U. S.; trade ties with Japan virtually severed.

**Aug. 12**—Pétain summons France to full support of Hitler.

**Aug. 14**—Atlantic Charter: FDR and Churchill agree on war aims.

**Oct. 3**—Hitler announces Russia is defeated and will never rise again.

**Nov. 26**—Hull presents proposals to envoys Kurusu and Nomura for readjusting U. S.-Japanese relations.

**Dec. 7**—Japan attacks Pearl Harbor, Philippines, Guam, forcing U. S. into war Dec. 8; Pacific Fleet crippled.

**Dec. 8**—U. S. and Britain declare war on Japan.

**Dec. 10**—Japanese planes sink British battleship *Prince of Wales* and battle cruiser *Repulse* off Malaya.

**Dec. 11**—Germany and Italy declare war on U. S.; Congress declares war on those countries.

1942

**Jan. 2**—MacArthur gives up Manila; fights on to hold Bataan and Corregidor.

**Jan. 5**—Consumer rationing begins in U. S. as auto tires are rationed.

**Jan. 28**—21 American nations, at Rio de Janeiro, call for severance of all ties with Axis.

**Jan. 30**—FDR signs price-control legislation.

**Feb. 15**—British surrender Singapore.

**Mar. 17**—MacArthur arrives in Australia; promises "I will return."

**Apr. 9**—U. S. forces on Bataan surrender.

**Apr. 18**—U. S. planes in Doolittle "Shangri-la" raid hit Tokyo.

**May 4-8**—Japanese fleet suffers heavy losses in Coral Sea; 1st naval battle in history fought entirely with carrier aircraft.

**May 6**—Gen. Wainwright surrenders Corregidor.

**May 30**—Over 1,000 RAF planes smash Cologne in one of war's mightiest raids.

**June 4-6**—U. S. aircraft inflict 1st serious setback on Japanese fleet near Midway.

**June 10**—Lidice, Czechoslovakia, razed; all males put to death in Nazi terror following Heydrich assassination.

**Nov. 8**—U. S. and Britain land great army in French North Africa.

**Nov. 11**—Nazis begin occupation of all France.

**Nov. 13-15**—U. S. smashes Japanese armada in Solomons.

**Nov. 27**—French scuttle main part of fleet at Toulon to save it from Nazis.

**Dec. 1**—Gasoline rationing begins.

1943

**Jan. 14-24**—Casablanca Conference: Churchill and FDR agree on unconditional-surrender goal.

**Feb. 1-2**—German 6th Army surrenders at Stalingrad; turning point of war in Russia.

**Mar. 29**—Rationing of meats, butter, cheese, canned fish, edible oils begins.

**May 12**—Remnants of Nazis trapped on Cape Bon, ending war in Africa.

**May 15**—3rd International (Comintern) dissolved in Moscow.

**June 10**—FDR signs withholding tax.

**July 25**—Mussolini deposed; Badoglio is Premier.

**Sept. 3**—Allied troops land on Italian mainland.

**Sept. 8**—Italy surrenders.

**Sept. 10**—Nazis seize Rome.

**Oct. 19-Nov. 1**—Moscow Conference: Hull, Eden, Molotov pledge unity to win war and establish world organization; promise democratic Italy and free Austria.

**Nov. 22-26**—Cairo Conference: FDR, Churchill, Chiang-Kai-shek pledge defeat of Japan, free Korea.

**Nov. 28-Dec. 1**—Teheran Conference: FDR, Churchill, Stalin agree on invasion plans.

**Dec. 26**—Nazi battleship *Scharnhorst* sunk by British off Norway.

1944

**Jan. 22**—Allied troops land behind German lines at Anzio near Rome.

**June 4**—Rome falls to Allies.

**June 6**—D-Day: Allies land in France.

**June 15**—Germans begin robot-bomb attacks on England.

**July 20**—Hitler wounded in bomb plot.

**Aug. 25**—Paris liberated.

**Oct. 20**—American troops invade Philippines.

**Dec. 16**—Germans launch counteroffensive in Belgium (Battle of Bulge).



1945

- Jan. 12—German line crumbles; Allies regain 100 sq. mi. in "Bulge."
- Feb. 3—U. S. troops enter Manila.
- Feb. 11—Yalta Agreement signed by FDR, Churchill and Stalin.
- Feb. 19—Marines land on Iwo Jima; raise flag on Mt. Suribachi Feb. 23.
- Apr. 1—U. S. invades Okinawa.
- Apr. 12—FDR dies; Truman is President.
- Apr. 25—U. N. parley opens at San Francisco.
- Apr. 25—Americans and Russians meet on Elbe.
- Apr. 28—Mussolini and mistress, Clara Petacci, killed by partisans.
- Apr. 29—33,000 inmates of Dachau concentration camp freed by U. S. forces.
- Apr. 30—Soviet flag raised over Reichstag in Berlin.
- May 1—Grand Adm. Karl Doenitz takes command in Germany; death of Hitler announced.
- May 2—Berlin falls.
- May 7—Germany surrenders unconditionally (V-E Day).
- June 26—U. N. Charter signed at San Francisco; goes into effect Oct. 24.
- June 28—Polish government under Russian influence installed, despite protests of government-in-exile.
- July 16—A-bomb test at Alamogordo, N. Mex. (announced Aug. 6).
- July 17-Aug. 2—Potsdam Conference: Truman, Churchill (Attlee after July 28), Stalin establish council of foreign ministers to prepare peace treaties; plan German postwar government and reparations.
- July 26—Attlee Prime Minister; Churchill is out.
- July 28—U. S. Senate ratifies (89-2) U. N. Charter.
- Aug. 6—A-bomb blasts Hiroshima.
- Aug. 8—Russia declares war on Japan.
- Aug. 9—Nagasaki hit by A-bomb.
- Aug. 14—Japan surrenders.
- Sept. 2—Japanese sign surrender terms aboard battleship *Missouri* (V-J Day).
- Oct. 24—U. N. officially established.
- Nov. 15—Truman, Attlee and Mackenzie King decide in Washington Conference that A-bomb secrets will not be shared until U. N. adopts control plan.
- Dec. 27—Moscow Conference, attended by Byrnes, Molotov and Bevin, makes preliminary plans for atomic-energy control, peace treaties and Korea.

1946

- Jan. 10—1st meeting of U. N. General Assembly opens in London.

Jan. 17—1st meeting of Security Council opens in London.

Jan. 19—Iran presents 1st case to Security Council; demands Russia get out of Azerbaijan; Russia withdraws May 6.

Feb. 2—Trygve Lie installed as 1st U. Secretary-General.

Apr. 3—1st meeting of International Court opens in The Hague (formal opening Apr. 18).

Apr. 3—Japanese Lt. Gen. Homma executed; ordered Bataan Death March.

Apr. 8-18—Final Assembly session in Geneva dissolves League of Nations.

Apr. 29—U. S. proposes treaty with Britain, Russia and France to keep Germany disarmed 25 years; Russia cool to idea.

May 31—U. S. and Britain demand free elections in Rumania.

July 1—Underwater atom bombing at Bikini. (Repeated July 25.)

Oct. 1—Verdict in Nuremberg war trial: 12 Nazi leaders (including 1 tried in absentia) sentenced to hang; 7 imprisoned; 3 acquitted.

Oct. 15—Goering commits suicide a few hours before 10 other Nazis are executed Oct. 16.

Nov. 9—Truman ends all price and wage controls, except on rent, sugar and rice.

Dec. 3—Greece charges Albania, Bulgaria and Yugoslavia with aiding Communist rebels in northern part of Greece.

Dec. 4—Judge Goldsborough fines John L. Lewis \$10,000 and UMW \$3.5 million for contempt in disobeying Court order.

Dec. 19—Fighting breaks out in Indo-China between French and Reds.

Dec. 30—U. N. Atomic Energy Commission recommends (10-0) U. S. control plan; Russia and Poland abstain.

1947

Jan. 1—Britain nationalizes coal mines.

Jan. 28—U. S. rebukes Polish Communists for rigging election.

Feb. 10—Peace treaties for Italy, Rumania, Bulgaria, Hungary, Finland signed in Paris.

Mar. 4—Russia rejects U. S. plan for U. N. atomic-energy control.

Mar. 12—Truman asks Congress for \$400 million to save Greece and Turkey from Communist expansion (Truman Doctrine).

Apr. 14—General Motors settles wage dispute with United Electrical Workers (CIO) with increase equivalent to 15¢ per hour; sets pattern.

June 5—Secy. of State Marshall says U. S. may have to spend billions to

put Europe on its feet economically (Marshall Plan).

**June 23**—Taft-Hartley Labor-Management Relations Act passed over Truman's veto.

**July 12-15**—16 nations meet in Paris to study Marshall Plan (Russia and 8 others stay away).

**Aug. 1**—Security Council calls on Dutch and Indonesians to cease hostilities.

**Aug. 15**—India freed by Britain.

**Aug. 31**—U. N. investigating committee recommends Britain give up control of Palestine and that Arab and Jewish states be established.

**Oct. 5**—Moscow announces formation of new 9-nation Communist Information Bureau (Cominform).

**Nov. 14**—General Assembly votes commission to set up free government for all of Korea.

**Nov. 20**—Princess Elizabeth married to Lt. Philip Mountbatten.

## 1948

**Jan. 17**—U. N. Good Offices Commission effects truce in Indonesia.

**Jan. 30**—Gandhi assassinated.

**Feb. 23-25**—Communists seize power in Czechoslovakia.

**Mar. 10**—Czech For. Min. Jan Masaryk plunges to death.

**Apr. 20**—Federal Court fines John L. Lewis \$20,000 and UMW \$1.4 million for criminal contempt for failure to call off strike within week, as ordered by Court.

**Apr. 21**—Security Council votes plebiscite in Kashmir to decide whether province goes to India or Pakistan; both sides object.

**May 14**—Nation of Israel proclaimed; British end mandate at midnight; Arab armies attack.

**May 25**—General Motors grants 11¢ hourly wage increase to UAW; wages to move up or down according to living costs—first escalator clause.

**June 11**—U. N. appeal brings temporary truce in Palestine.

**June 18**—Russia stops traffic between Berlin and Western occupation zones in Germany.

**June 21**—Berlin airlift begins; ends May 12, 1949.

**June 22**—Russian veto prevents Security Council from approving atomic-control plan favored by majority.

**June 28**—Stalin and Tito break.

**Aug. 15**—Independent Republic of Korea is proclaimed, following election supervised by U. N.

**Nov. 4**—General Assembly approves U. S.-sponsored atomic control plan.

**Nov. 12**—Verdict in Japanese war trial: Tojo and 6 others sentenced to hang (hanged Dec. 23); 18 imprisoned.

## 1949

**Jan. 7**—Cease-fire in Palestine.

**Jan. 20**—Truman proposes Point 4 Program to help world's backward areas.

**Feb. 8**—Cardinal Mindszenty sentenced in Hungary to life imprisonment.

**Feb. 24**—Israel signs armistice with Egypt.

**Apr. 4**—Start of NATO; treaty signed by 12 nations.

**May 11**—U. N. admits Israel.

**Sept. 21**—German Federal Republic (West Germany) established.

**Sept. 24**—Truman discloses Russia has set off atomic explosion.

**Oct. 14**—11 top Communist leaders in U. S. found guilty of advocating overthrow of government.

**Oct. 16**—Greek rebels announce end of military operations.

**Oct. 26**—Minimum wage raised to 75¢.

**Dec. 8**—Nationalist Chinese government moves to Formosa.

## 1950

**Jan. 13**—Russia boycotts Security Council (until Aug. 1) because Red China was refused admittance to U. N.

**Jan. 21**—Alger Hiss convicted of perjury in denying he gave U. S. secrets to Whittaker Chambers for Communists.

**Jan. 31**—Truman orders development of hydrogen bomb.

**Feb. 11**—Sen. Joseph R. McCarthy (R. Wis.) says 57 Communists are working in State Dept.

**Mar. 1**—Britain sentences Dr. Klaus Fuchs to 14 years in prison for giving atomic secrets to Russia.

**June 25**—North Koreans cross 38th parallel to invade South Korea.

**June 27**—Truman orders U. S. air and sea aid to South Koreans.

**June 27**—Security Council (at that time boycotted by Russia) calls on U. N. members to help repel North Korean aggression.

**June 28**—Reds capture Seoul.

**July 8**—Truman names MacArthur commander of U. N. forces in Korea.

**Sept. 15**—U. S. 10th Corps makes amphibious landing at Inchon, port for Seoul; cuts behind North Koreans.

**Sept. 26**—MacArthur announces capture of Seoul.

**Oct. 7**—U. S. 1st Cavalry make 1st U. S. crossing of 38th parallel.

**Nov. 20**—U. S. 7th Division unit reaches Manchurian border.

**Nov. 26**—Chinese open massive offensive; hurl U. N. forces back.

Nov. 29-Dec. 11—U. N. forces stranded at Changjin Reservoir; escape to Hungnam; are evacuated by sea Dec. 12-24.

Dec. 19—Eisenhower named commander of NATO forces in Europe.

## 1951

Feb. 1—General Assembly condemns (44-7) Red China as an aggressor.

Mar. 12-21—Senate Crime Investigating Comm. headed by Kefauver holds hearings in New York City.

Mar. 19—6 nations initial Schuman Plan to pool European coal and steel market. (In effect Feb. 10, 1953.)

Mar. 24—MacArthur intimates U. N. will attack Red China; says he will meet with Reds at any time for truce talks.

Apr. 5—Julius and Ethel Rosenberg sentenced to death as atom spies.

Apr. 11—Truman removes MacArthur from all commands.

May 18—U. N. votes (47-0) arms embargo against Red China; Soviet-bloc members refuse to vote.

June 23—Russia proposes truce.

July 10—Truce talks begin in Korea.

Aug. 21—U. S. orders construction of world's 1st atomic submarine.

Sept. 8—Japanese peace treaty signed in San Francisco by 49 nations.

Oct. 26—Churchill again Prime Minister.

## 1952

Feb. 6—George VI dies; his daughter becomes Elizabeth II.

Feb. 19—French National Assembly approves European army project.

Feb. 20-25—NATO conference approves European Army; sets goal of 50 divisions and 4,000 planes by end of 1952.

Apr. 8—Truman seizes steel industry to prevent nation-wide strike.

May 7—Truman says U. N. will never return Chinese and Korean Communist prisoners who fear to go back.

May 26—Western Allies and West Germany sign peace contract at Bonn.

May 27—6 nations sign European Defense Community treaty at Paris.

June 2—Supreme Court (6-3) rules Truman's seizure of steel mills unconstitutional; mills returned to owners; USW goes on strike to July 24.

Sept. 19—U. S. bars Charles Chaplin from re-entering U. S. after trip abroad.

## 1953

Jan. 13—Russia arrests 9 Kremlin physicians, mostly Jews, on charges they plotted death of high officials; freed Apr. 4.

Feb. 6—All wage controls and many price controls end.

Mar. 5—Stalin dies.

Mar. 6—Malenkov becomes Soviet Premier; Beria is Minister of Interior; Molotov is Foreign Minister.

Apr. 10—Dag Hammarskjöld begins term as U. N. Secretary General.

May 22—Eisenhower signs Off-Shore Oil Law giving states rights to minerals in submerged lands within their boundaries.

May 29—Mt. Everest climbed by British expedition.

June 2—Coronation of Elizabeth II.

June 8—Agreement on POWs reached at Panmunjom; India to head 5-nation commission for custodianship of POWs refusing repatriation.

June 17—East Berliners rise against Communist rule; quelled by tanks.

June 18-21—Pres. Rhee frees 27,000 anti-Red POWs in defiance of U. N. Red prisoner agreement; truce talks halted June 20.

June 19—Rosenbergs executed.

July 10—Beria is imprisoned on charge of treason; executed Dec. 23.

July 10—Truce talks are resumed.

July 27—Korean armistice signed.

Aug. 5-Sept. 6—POWs exchanged in "Operation Big Switch"; 12,760 released by Reds, 75,799 by U. N.; U. N. believes Reds hold many back.

Aug. 20—Moscow announces explosion of hydrogen bomb.

Dec. 23—21 U. S. POWs turn down repatriation; prefer communism.

## 1954

Jan. 19—General Motors announces \$1-billion expansion program.

Jan. 20-21—India turns over to Allies more than 21,000 Chinese and North Korean prisoners who spurn communism; they are released Jan. 22.

Jan. 21—1st atomic-powered submarine *Nautilus*, launched at Groton, Conn.

Jan. 23-24—Ernest Hemingway and wife survive 2 plane crashes in Africa.

Jan. 26—U. S. Senate ratifies (81-6) mutual security treaty with Republic of Korea.

Feb. 18—Big 4 Foreign Ministers conference in Berlin ends; only agreement is for Far East parley in Geneva.

Feb. 26—East Germany is granted "sovereignty" by Russia, but Russian troops will continue occupation.

Mar. 1-5 Congressmen wounded as 3 Puerto Rican nationalists fire from House gallery.



*Apr. 4*—Arturo Toscanini resigns as conductor of NBC Symphony Orchestra; to retire after 68-yr. career.

*Apr. 22-June 17*—Army vs. McCarthy inquiry; subcommittee report Aug. 31 blames both sides.

*Apr. 26*—19-nation conference on Korea and Indo-China opens in Geneva.

*May 7*—Dienbienphu falls to Indo-China Red rebels.

*May 17*—U. S. Supreme Court unanimously bans segregation in public schools.

*June 15*—Allies end negotiations for Korea peace at Geneva conference, blaming Communist intransigence.

*June 18*—Anti-Communist exiles invade Guatemala; revolt ends July 2.

*June 29*—AEC votes (4-1) that J. Robert Oppenheimer is security risk.

*July 21*—Indo-China truce signed at Geneva conference; Reds get half of Vietnam.

*Aug. 6*—Emilie Dionne, one of quintuplets, dies at 20.

*Aug. 24*—Communist party outlawed in U. S.

*Aug. 30*—French Assembly kills European Defense Community treaty.

*Sept. 6*—Eisenhower launches world atomic pool without Russia.

*Sept. 8*—8-nation Southeast Asia defense treaty signed at Manila.

*Oct. 23*—West Germany is granted sovereignty and is admitted to NATO and Western European Union.

*Nov. 24*—William W. Remington murdered by fellow convicts.

*Nov. 27*—Alger Hiss (see Jan. 21, 1950) released after 44 months in prison.  
*Dec. 2*—Senate "condemns" Sen. McCarthy on 2 counts by 67-22 vote.

# 1955

*Jan. 17*—Submarine *Nautilus* goes to sea under atomic power.

*Feb. 8*—Malenkov resigns as Soviet Premier; Bulganin succeeds him.

*Mar. 16*—Secret Yalta Conference papers released by U. S. State Dept.

*Apr. 5*—Churchill resigns; Eden succeeds him Apr. 6.

*Apr. 12*—Scientists OK Salk vaccine.

*Apr. 18-23*—29-nation Asian-African conference rejects colonialism.

*May 31*—Supreme Court leaves school desegregation to regional Federal courts.

*July 11*—Eisenhower cancels Dixon-Yates contract.

*July 16*—Hungary releases Cardinal Mindszenty. (See Feb. 8, 1949.)

*July 29*—U. S. to build tiny "moon" to circle earth like satellite.

*Aug. 25*—Public Health Service blames own weak safety standards for live virus in Cutter anti-polio vaccine.

*Sept. 16*—Ford Foundation benefits students; college salaries and hospitals (Dec. 12).

*Sept. 19*—Argentina ousts Perón.

*Sept. 24*—Pres. Eisenhower suffers coronary thrombosis in Denver.

*Sept. 27*—Egypt to buy Soviet arms.

*Dec. 7*—AFL and CIO merge.

*Dec. 14*—U. N. admits 16 new members. (For later items see News Record of 1956.)

## Significant Changes in Political Status Since 1945

### EUROPE

Country	Previous Status	Present Status	Date
Albania	Monarchy	Republic†	1946
Bulgaria	Monarchy	Republic†	1946
Czechoslovakia	Republic	Republic†	1948
Germany	Under Allied Control Council	Divided; now 2 sovereign states*	1955
Hungary	Nominal Monarchy	Republic†	1946
Ireland	British Dominion	Republic	1949
Italy	Monarchy	Republic	1946
Poland	Republic	Republic†	1945
Rumania	Monarchy	Republic†	1947
Saar	Part of French Occupation Zone under Allied Control Council	Autonomous (subject to reserved powers of France)	1950
Trieste	Under temporary Yugoslav and Allied Control	Divided between Italy and Yugoslavia	1954
Yugoslavia	Republic†	Republic†	1948

\* The German Federal Republic (West Germany); the German Democratic Republic (East Germany), Communist. † Communist.

## Significant Changes in Political Status (Contd.)

## ASIA

Country	Previous Status	Present Status	Date
Burma	Member of British Commonwealth	Republic	1948
Cambodia	French Protectorate	Constitutional Monarchy <sup>a</sup>	1948
China	Republic	Republic <sup>1</sup>	1949
Ceylon	British Crown Colony	British Dominion	1948
Formosa	Dependency of Japan	Province of China	1949
French Establishments in India	French Colonies	Part of India	1950
India	British Dominion	Republic <sup>2</sup>	1947 & 1950
Indonesia	Part of Netherlands Indies	Republic	1945
Israel	Part of British Mandate of Palestine	Republic	1948
Korea	Dependency of Japan	Divided <sup>4</sup>	1948
Laos	French Protectorate	Constitutional Monarchy <sup>a</sup>	1948
Malaya	Protected states (under Britain)	Transitional <sup>7</sup>	1950
Pakistan	British Dominion (1947)	Republic <sup>8</sup>	1950
Palestine	British Mandate	Partitioned <sup>5</sup>	1950
Philippines	Transition to complete independence	Republic	1946
Vietnam	French Colony (Cochin-China) and Protectorates (Annam, Tonking)	Divided <sup>3</sup>	1950

<sup>1</sup> Communist controlled. <sup>2</sup> Within the British Commonwealth. <sup>3</sup> National State of Vietnam (south part) is associated state of French Union; Democratic Republic of Vietnam (north part) is Communist controlled. <sup>4</sup> North Korea, People's Republic (Communist controlled) and Republic of Korea (South Korea). <sup>5</sup> Armistice signed at Panmunjon on July 21, 1953, ended war between North and South Korea. <sup>6</sup> Between Israel and Jordan. <sup>7</sup> Associated state of French Union. <sup>8</sup> Britain agreed to Malayan self-government within British Commonwealth by Aug. 1957. <sup>9</sup> "The Islamic Republic of Pakistan" within British Commonwealth. <sup>10</sup> All reference to the French Union was dropped from the 1955 Constitution.

## AFRICA

Country	Previous Status	Present Status	Date
Egypt	Monarchy	Republic	1953
Libya	Italian Colony	Independent Monarchy	1951
Morocco, French	French Protectorate	Independent <sup>1</sup>	1956
Morocco, Spanish	Spanish Protectorate	Transitional <sup>2</sup>	1955
Sudan	Anglo-Egyptian condominium	Independent Republic	1956
Suez Canal Zone	Protected by Britain	Part of Egypt	1956
Tunisia	French Protectorate	Independent <sup>1</sup>	1956

<sup>1</sup> Implementation in progress; agreement pledged "interdependence" with France. <sup>2</sup> Agreement recognized in principle its independence and territorial unity with French Morocco.

## WESTERN HEMISPHERE

Country	Previous Status	Present Status	Date
Greenland	Danish Colony	Part of Danish kingdom	1953
Netherlands Antilles	Part of Netherlands West Indies	Part of Netherlands kingdom	1953
Surinam	Part of Netherlands West Indies	Part of Netherlands kingdom	1954

# Line-Up of Nations

## WORLD WAR I

Allies			Central Powers
Belgium	Guatemala	Panamá	Austria-Hungary
Brazil	Haiti	Portugal	Bulgaria
China	Honduras	Rumania	Germany
Costa Rica	Italy	Russia	Turkey
Cuba	Japan	Serbia	
France	Liberia	Slam	
Great Britain	Montenegro	United States	
Greece	Nicaragua		

## WORLD WAR II

The United Nations*			The Axis
Argentina	Ethiopia	Norway	Albania
Australia	France	Panamá	Bulgaria
Belgium	Greece	Paraguay	Finland
Bolivia	Guatemala	Peru	Germany
Brazil	Haiti	Philippines	Hungary
Canada	Honduras	Poland	Italy
Chile	India	Saudi Arabia	Japan
China	Iran	Syria	Rumania
Colombia	Iraq	Turkey	Slovakia
Costa Rica	Lebanon	Un. of So. Africa	Thailand
Cuba	Liberia	United Kingdom	
Czechoslovakia	Luxemburg	United States	
Denmark	Mexico	U.S.S.R.	
Dominican Republic	Netherlands	Uruguay	
Ecuador	New Zealand	Venezuela	
El Salvador	Nicaragua	Yugoslavia	

\* Italy became a co-belligerent in 1944.

## THE COLD WAR

Anti-Communist Organizations			Communist Nations
North Atlantic Treaty Organization (NATO)			Europe
Belgium	Greece	Norway	Albania
Canada	Iceland	Portugal	Bulgaria
Denmark	Italy	Turkey	Czechoslovakia
France	Luxemburg	United Kingdom	German Democratic
Germany (West)*	Netherlands	United States	Republic (East)
Western European Union†			Hungary
Belgium	Germany (West)*	Netherlands	Poland
France	Italy	United Kingdom	Rumania
	Luxemburg		U.S.S.R.
Southeast Asia Treaty Organization (SEATO)			Asia
Australia	Pakistan	United Kingdom	China
France	Philippines	United States	Korean People's
New Zealand	Thailand		Republic (North)
Middle East Treaty Organization (METO) (Baghdad Pact)			Mongolian People's
Iran	Pakistan	United Kingdom	Republic
Iraq	Turkey		Tibet (actually
			part of Communist
			China)
			Vietnam (North)

\* German Federal Republic. † U. S. and Canada are guarantors but not participants.



# THE UNITED STATES



## STATES, TERRITORIES AND CITIES

(State flower, bird, etc. are official unless otherwise indicated; dates in parentheses are those of admission. Area is total of land and inland water. Estimated population figures for 1955 are as of July 1, 1955, and are provisional. Largest cities include incorporated places only. For Governors elected in the 1955 elections, consult index.)

### ALABAMA

**Capital:** Montgomery.  
**Governor:** James E. Folsom, Dem. (to Jan. 1959).  
**Organized as territory:** Mar. 3, 1817.  
**Entered Union & (rank):** Dec. 14, 1819 (22).  
**Seceded from Union:** Jan. 11, 1861.  
**Re-entered Union:** July 13, 1868.  
**Present constitution adopted:** 1901.  
**Motto:** *Audemus jura nostra defendere* (We dare defend our rights).  
**State flower:** Goldenrod (1927).  
**State bird:** Yellowhammer (1927).  
**State song:** "Alabama" (1931).  
**Nickname:** Yellowhammer State.  
**Origin of name:** Disputed. May come from Choctaw meaning "thicket-clearers" or "vegetarian-gatherers."  
**1940 population & (rank):** 2,832,961 (17).  
**1950 population & (rank):** 3,061,743 (17).  
**1955 estimated population:** 3,033,000.  
**Area & (rank):** 51,609 sq. mi. (28).  
**Geographic center:** In Chilton Co., 12 mi. SW of Clanton.  
**Number of counties:** 67.  
**Largest cities (1950 Census):** Birmingham (326,037); Mobile (129,009); Montgomery (106,525); Gadsden (55,725); Tuscaloosa (46,396).  
**State forests:** 6 (14,248.58 ac.).  
**State parks:** 34 (39,619.6 ac.).  
**State general revenue (1953):** \$235,220,058.  
**State general expenditure (1953):** \$239,525,288.

Alabama is the biggest heavy-industry state in the South. Cotton goods, iron and steel and saw mill products lead Alabama's manufacturing, which is centered in the mills, mines and factories in and around Birmingham, the "Pittsburgh of the South." The state is also high in the growing of nuts, corn, hay and sweet potatoes. Other interests include the making of commercial fertilizer and shipping of raw cotton, iron and steel and hardwood lumber. Muscle Shoals, on the Tennessee River, provides a great electric power source.

At Tuskegee Institute, founded by Booker T. Washington, Dr. George Washington Carver carried out his famed agricultural research.

The Confederacy was founded at Montgomery in Feb. 1861, and for a time the city was the Confederate capital.

In 1540, Hernando de Soto and his treasure seekers were the first white men to see the state, although Cabeza de Vaca may have preceded him in 1528.

### ARIZONA

**Capital:** Phoenix.  
**Governor:** Ernest W. McFarland, Dem. (to Jan. 1957).  
**Organized as territory:** Feb. 24, 1863.  
**Entered Union & (rank):** Feb. 14, 1912 (48).  
**Present constitution adopted:** 1911.  
**Motto:** *Ditat Deus* (God enriches).  
**State flower:** Flower of saguaro cactus (1931).  
**State bird:** Cactus wren (1931).  
**State colors:** Blue and old gold (1915).  
**State song:** "Arizona," a march song (1919).  
**State tree:** Palo Verde (1954).  
**Nickname:** Grand Canyon State.  
**Origin of name:** From the Indian "Arizonac" meaning "little spring."  
**1940 population & (rank):** 499,261 (43).  
**1950 population & (rank):** 749,587 (37).  
**1955 estimated population:** 980,000.  
**Area & (rank):** 113,909 sq. mi. (5).  
**Geographic center:** In Yavapai Co., 55 mi. S of Prescott.  
**Number of counties:** 14.  
**Largest cities (1950 Census):** Phoenix (106,818); Tucson (45,454); Mesa (16,790); Douglas (9,442); Yuma (9,145).  
**State forests:** None.  
**State parks:** None.  
**State revenue (1954-55):** \$105,047,000.  
**State expenditure (1954-55):** \$96,892,000.

Agriculture is Arizona's largest revenue producing industry. By means of irrigation its once arid acres produce alfalfa, cotton, wheat, sorghum, vegetables, citrus fruits and dates. Income from livestock ranks high from both range and feeder cattle.

Mining of copper, gold, vanadium, uranium and silver ranks next among the industries; the production of copper exceeding that of any other state. Smelting and refining are leading activities.

Phoenix, its largest city, is both a popular health resort and a busy shipper of cotton and vegetables. Douglas loads cattle and smelts copper.

With the Hopi, Navajo (the largest Indian numbers) and Apache tribes, Arizona has the largest U. S. Indian population, spread over fourteen reservations. It also has some of the country's most famous scenery. In the north is the Grand Canyon; in the east are located the Petrified Forest and Painted Desert.

Marcos de Niza, a Franciscan friar, entered the state in 1539 in search of the mythical Seven Cities of Cibola, and was followed a year later by Coronado.

## ARKANSAS

Capital: Little Rock.  
 Governor: Orval Faubus, Dem. (to Jan. 1957).  
 Organized as territory: Mar. 2, 1819.  
 Entered Union & (rank): June 15, 1836 (25).  
 Seceded from Union: May 6, 1861.  
 Re-entered Union: June 22, 1868.  
 Present constitution adopted: 1874.  
 Motto: *Regnat populus* (The people rule).  
 State flower: Apple Blossom (1901).  
 State tree: Pine (1939).  
 State bird: Mockingbird.  
 State song: "The Arkansas Traveler" (1949).  
 Nickname: Land of Opportunity.  
 Origin of name: From the Quapaw Indians.  
 1940 population & (rank): 1,949,387 (24).  
 1950 population & (rank): 1,909,511 (30).  
 1955 estimated population: 1,789,000.  
 Area & (rank): 53,102 sq. mi. (26).  
 Geographic center: In Pulaski Co., 12 mi. N of W of Little Rock.  
 Number of counties: 75.  
 Largest cities (1950 Census): Little Rock (102,213); Fort Smith (47,942); North Little Rock (44,097); Pine Bluff (37,162); Hot Springs (29,307).  
 State forests: None.  
 State parks: 11 (18,380 ac.).  
 State general revenue (1951): \$101,207,000.  
 State general expenditure (1951): \$99,000,000.

About 90 per cent of the nation's bauxite—the source of aluminum—comes from the earth of Arkansas, which also contains North America's only known diamond mine, located in Pike County near Murfreesboro, and presently inactive.

Mostly flat, Arkansas has an equable southern climate and fertile central valleys which grow cotton, rice, wheat, corn, oats, potatoes and fruit. Other industries are oil production, lumbering and the production of whetstones and antimony ore.

Hot Springs entertains fifteen times its population in guests each year. Its forty-seven famous curative mineral springs, the only ones administered by the Federal Government, are in Hot Springs National Park in the Ouachita Mountains. Pine Bluff has the unique distinction of having the largest archery factory in the country.

## CALIFORNIA

Capital: Sacramento.  
 Governor: Goodwin J. Knight, Rep. (to Jan. 1959).  
 Entered Union & (rank): Sept. 9, 1850 (31).  
 Present constitution adopted: 1879.  
 Motto: *Eureka* (I have found it).  
 State flower: Golden poppy (1903).  
 State tree: California redwoods (*Sequoia sempervirens* & *Sequoia gigantea*) (1937 & 1953).  
 State bird: California valley quail (1931).  
 State animal: California grizzly bear (1953).  
 State fish: California golden trout (1947).  
 State insect: California dog-face butterfly (unofficial).  
 State colors: Blue and gold (1951).  
 State song: "I Love You, California" (1951).  
 Nickname: Golden State.  
 Origin of name: From a book, *Amadis de Gaula*, by García Ordóñez de Montalvo, c. 1500.

1940 population & (rank): 6,907,387 (5).  
 1950 population & (rank): 10,586,223 (2).  
 1955 estimated population: 13,032,000.  
 Area & (rank): 158,693 sq. mi. (2).  
 Geographic center: In Madera Co., 35 mi. NE of Madera.  
 Number of counties: 58.  
 Largest cities (1950 Census): Los Angeles (2,104,663); San Francisco (798,000); Oakland (397,000); San Diego (434,924); Long Beach (262,000).  
 State forests: 8 (70,235 ac.).  
 State parks and beaches: 145 (566,938 ac.).  
 State general revenue (1955): \$1,848,328,000.  
 State general expenditure (1955) \$1,836,506,000.

California earns more money from raising food and catching fish than any other state, and it stands high in oil production, lumbering and manufacturing. It has more motor vehicles than any other state or any foreign country. Out-of-state tourist visitors and the travel and recreation expenditures of the state's residents continue to play an important part in the expansion of trade and employment opportunities. Irrigation makes possible the production of more than 200 commercial crops, including cotton, hay, grapes, oranges, barley, lettuce, tomatoes, potatoes, sugar beets, rice and peaches.

Nature is spectacular. Death Valley, in the southeast, is 282 feet below sea level, the lowest spot in the nation; Mt. Whitney, a 14,495-foot peak, is the highest point in the U. S.; Lassen Peak is the only active U. S. volcano although its last eruptions were recorded in the years from 1914 to 1917; and the General Sherman Tree in Sequoia National Park is estimated to be about 3,500 years old. San Pedro is the world's largest man-made harbor, and the Bank of America National Trust and Savings Association, operated and owned by the Ginnini family, is the largest privately owned bank in the world.

Gold, which was responsible for the state's settlement boom, is still found here, but the state's most important mineral products today are oil, natural gas and natural gas liquids, cement, liquefied petroleum gases, miscellaneous stones, salines, iron ore and tungsten.

California is a leader in electrical energy, and its cities specialize in airplane making, lumber and wood products, printing and publishing, apparel and machinery manufacturing, motor-vehicle production and food processing.

California's 4 national parks are great tourist attractions, and the San Francisco-Oakland and Golden Gate bridges are among the world's engineering marvels.

Juan Rodríguez Cabrillo, Portuguese navigator, was probably the first white man to see the state in 1542.

## COLORADO

Capital: Denver.  
 Governor: Edwin C. Johnson, Dem. (to Jan. 1957).  
 Organized as territory: Feb. 28, 1861.  
 Entered Union & (rank): Aug. 1, 1876 (38).

Present constitution adopted: 1876.

Motto: *Nil sine Numine* (Nothing without Providence).

State flower: Rocky Mountain columbine (1899).

State tree: Colorado blue spruce (1939).

State bird: Lark bunting (1931).

State colors: Blue and white (1911).

State song: "Where the Columbines Grow" (1915).

Nickname: Centennial State.

Origin of name: From the Spanish, meaning "red."

1940 population & (rank): 1,123,296 (33).

1950 population & (rank): 1,325,089 (34).

1955 estimated population: 1,549,000.

Area & (rank): 104,247 sq. mi. (7).

Geographic center: In Park Co., 30 mi. NW of Pikes Peak.

Number of counties: 63.

Largest cities (1950 Census): Denver (415,786);

Pueblo (63,685); Colorado Springs (45,472);

Greeley (20,354); Boulder (19,999).

State forests: 1 (70,980 ac.).

Total state revenue (1955): \$238,549,618.

Total state expenditure (1955): \$232,035,801.

Colorado, the most elevated state in the nation, with 54 of its peaks over 14,000 feet in height and more than 1,000 going beyond the 10,000-foot mark, began as a miner of gold but has been predominantly agricultural in recent times. Livestock, wheat, hay, beans, sugar beets, corn, potatoes, barley and truck vegetables head the crop list. Like California and Arkansas, the state has a highly developed irrigation system to counteract its dry climate and promote farming.

Colorado is one of the nation's largest producers of uranium and vanadium; also mined are gold, silver, lead, zinc, copper, molybdenum, coal and several nonmetals. The state is also a leading oil producer.

Pueblo, the "Pittsburgh of the West," makes iron, steel, brick, tile and foundry products. Colorado Springs is perhaps the most popular tourist center in the Rocky Mountain sector. Mount Evans Highway is the highest auto road in North America. The world's highest suspension bridge stretches 1,053 feet over the Royal Gorge of the Arkansas River. Summit Lake, 12,740 feet high, near the top of Mt. Evans, is the highest lake in the U. S. reached by an auto road.

Of archeological interest are the cliff dwellings in the southwestern part of the state.

Coronado entered the state in 1540.

## CONNECTICUT

Capital: Hartford.

Governor: Abraham A. Ribicoff, Dem. (to Jan. 1959).

Entered Union & (rank): Jan. 9, 1788 (5).

Present constitution adopted: 1818; revised effective 1955.

Motto: *Qui transtulit sustinet* (He who transplanted still sustains).

State flower: Mountain laurel (1907).

State tree: White oak (1947).

State bird: American robin (1943).

State song: None.

Nicknames: Constitution State; Nutmeg State; Land of Steady Habits.

Origin of name: From an Indian word meaning "beside the long tidal river."

1940 population & (rank): 1,709,242 (31).

1950 population & (rank): 2,007,280 (28).

1955 estimated population: 2,241,000.

Area & (rank): 5,009 sq. mi. (46).

Geographic center: In Hartford Co., at East Berlin.

Number of counties: 8.

Largest cities (1950 Census): Hartford (173,397); New Haven (164,443); Bridgeport (158,709); Waterbury (104,477); Stamford (74,293).

State forests: 26.

State parks: 66.

State general revenue (1954): \$207,098,000.

State general expenditure (1954): \$219,607,000.

Connecticut earned its sobriquet, the "Arsenal of the Nation," by its ability to turn out firearms and ammunition in early days, and from this developed an ability to turn out precision instruments of all classes.

Connecticut's cities produce a variety of products, some of which are: arms, sewing machines, airplanes, typewriters, motor hardware, cutlery, tools, clocks, locks, pottery, machinery, brass products and hats. Hartford, which has the oldest U. S. newspaper, the *Courant*, established in 1764, is the insurance capital of the nation.

Connecticut devotes its farmland mainly to dairying, fruit growing and poultry raising. It stands high in tobacco growing and no crop in the nation receives as high a price per acre as her shade-grown tobacco.

The state is a popular resort area both for its beaches on Long Island Sound and for its inland lakes and forested hills. The southwest part of the state is a suburban area of New York City.

Connecticut was the first state to have a written constitution, the *Fundamental Orders*, adopted by three original towns of Colonial days in Jan. 1639.

## DELAWARE

Capital: Dover.

Governor: J. Caleb Boggs, Rep. (to Jan. 1957).

Entered Union & (rank): Dec. 7, 1787 (1).

Present constitution adopted: 1897.

Motto: Liberty and independence.

State flower: Peach blossom.

State bird: Blue hen chicken.

State song: "Our Delaware."

Nicknames: Diamond State; Blue Hen State; First State.

Origin of name: In honor of Sir Thomas West, Lord De La Warr.

1940 population & (rank): 266,505 (46).

1950 population & (rank): 318,085 (46).

1955 estimated population: 387,000.

Area & (rank): 2,057 sq. mi. (47).

Geographic center: In Kent Co., 11 mi. S. of Dover.

Number of counties: 3.

Largest cities (1950 Census): Wilmington (110,356); Newark (6,731); Dover (6,223).

New Castle (5,396); Elsmere (5,314).

State forests: 5 (4,200 ac.).

State parks: 3.

State general revenue (1955): \$40,287,093.

State general expenditure (1955): \$41,933,720.



Little Delaware, at the lowest mean elevation of any state, grows a great variety of small fruit and vegetables and is a U. S. pioneer in the industry of food canning. Peaches, strawberries, apples, corn, wheat, lima beans, asparagus, tomatoes and hay are the leading crops. Fishing in the bay is an important industry. Delaware's chicken farms are one of the great supply sources for the big markets of the East.

Manufactures in Delaware include chemicals, vulcanized fiber, glazed kid and morocco leathers, textiles, paper, metal products, machinery, machine tools and transportation equipment of every major type. In 1844, the *Bangor*, the first iron seagoing propeller-type vessel constructed in the U. S., was launched at Wilmington.

Delaware was the first state to ratify the U. S. Constitution, on Dec. 7, 1787. During the Civil War, although a slave state, Delaware refused to secede from the Union; the southern part of the state, however, supplied many supporters to the Confederacy.

Henry Hudson discovered Delaware Bay in his exploration of 1609. First settlers in the state were Dutchmen, who arrived in 1631, but who were shortly afterwards massacred by the Indians.

## DISTRICT OF COLUMBIA

(City of Washington)

Land ceded to Congress: 1788 by Maryland; 1789 by Virginia (retroceded to Virginia Sept. 7, 1846).

Seat of government transferred to D. C.: Dec. 1, 1800.

Created municipal corporation: Feb. 21, 1871. Present form of government established: June 11, 1878.

President of Board of Commissioners: Robert E. McLaughlin.

Motto: *Justitia omnibus* (Justice to all).

Official flower: American beauty rose.

Origin of name: In honor of Columbus.

1940 population & (rank as city): 663,091 (11).

1950 population & (rank as city): 802,178 (9).

1955 estimated population: 853,000.

Area: Land, 60.41 sq. mi.; inland water, 7.84.

Geographic center: Near corner of Fourth and L Sts., NW.

Altitude: Highest, 420 ft.; lowest, sea level.

Location: Between Virginia and Maryland, on Potomac River.

Churches: Protestant, 428; Roman Catholic, 40; Jewish, 21; others, 21.

City parks: 780 (6,945.5 ac.).

Telephones (Mar. 1, 1956): 553,507.

Radio sets: 250,400.

Television sets: 227,400.

Radio stations: AM, 7; FM, 8.

Television stations: 4.

Assessed valuation (June 30, 1956): \$3,148,440,-611.

City tax rate (1955): \$2.20 per \$100.

Bonded debt (1955): None.

Revenue (1955): \$187,110,976.

Expenditures (1955): \$171,197,159.

The District of Columbia—identical with the City of Washington—is the capital of the U. S. and the first carefully planned capital in the world.

D. C. history began in 1790 when Congress directed selection of a new capital site, 10 miles square, along the Potomac. When the site was determined, it included thirty and three-quarters square miles on the Virginia side of the river. In 1846, however, Congress returned that area to Virginia.

President Washington had commissioned Major Pierre L'Enfant, a French engineer who had fought in the Revolution, to plan the new capital and in 1800 the government moved in. In 1814, during the War of 1812, a British force fired the capital and it was from the white paint applied to cover fire damage that the President's home came to be called the White House.

Washington's skyline is dominated by the Capitol and the Washington Monument, towering 555 feet. The Capitol, while not in the city center, is the key to the street address system. The city is laid out in rectangular blocks, created by streets intersecting at right angles. In addition, diagonal arteries fan out from various centers. Pennsylvania Avenue—the radial lines are generally named for the states—is the most famous of them, with the White House at number 1600.

The Capitol is 751 feet long and 350 feet wide. It has 431 rooms. The two wings, constructed of marble, house the Senate and the House; and the central part of the building contains the Rotunda, the Statuary Hall and the old Supreme Court chamber. Visitors may go through the building from 9 A.M. until 4:30 P.M. Congress normally convenes at noon, and the floor of the Senate and House must be cleared by 11:45 A.M. The galleries in the Senate and House chambers are open to visitors during sessions.

Washington has many other famous buildings and monuments—the Library of Congress, Jefferson Memorial, Lincoln Memorial, Grant Memorial, Tomb of the Unknown Soldier (Arlington Cemetery), Treasury Building, the Pentagon, Petersen House (where Lincoln died) and scores of others.

Washington is administered by three commissioners appointed by the President. Two of them must be residents of the District of Columbia and the third must be a U. S. Army engineer appointed by the Chief of Engineers.

## FLORIDA

Capital: Tallahassee.

Governor: LeRoy Collins, Dem. (to Jan. 1957).

Organized as territory: Mar. 30, 1822.

Entered Union & (rank): Mar. 3, 1845 (27).

Seceded from Union: Jan. 10, 1861.

Re-entered Union: June 25, 1868.

Present constitution adopted: 1885.

Motto: In God we trust.

State flower: Orange blossom (1909).

State bird: Mockingbird (1927).

State song: "Swanee River" (1935).

Nickname: Sunshine State.

Origin of name: From the Spanish, meaning "feast of flowers" (Easter).

1940 population & (rank): 1,897,414 (27).

1950 population & (rank): 2,771,305 (20).

1955 estimated population: 3,452,000.

**Area & (rank):** 58,666 sq. mi. (21).  
**Geographic center:** In Citrus Co., 12 mi. W of N of Brooksville.  
**Number of counties:** 67.  
**Largest cities (1950 Census):** Miami (249,276); Jacksonville (204,517); Tampa (124,681); St. Petersburg (96,738); Orlando (52,367).  
**State forests:** 4 (204,035 ac.).  
**State parks:** 23 (74,936 ac.).  
**State general revenue (1953):** \$278,479,314.  
**State general expenditure (1953):** \$220,374,511.

Agriculture is Florida's biggest steady pursuit, but hotel statistics point to its chief fame—resort and tourist business. Along its coastline, the longest of any state, dozens of communities more than double in population during the winter season when northerners flee snow and cold.

Oranges and grapefruit lead Florida's crop list, then come tomatoes, tobacco, beans, celery, potatoes and field corn. Truck gardening, commercial fishing and cattle are leading industries. Deep-sea fishing for sport is a leading tourist hobby.

Florida's low elevation is dotted by some 30,000 small lakes and the Everglades National Park in the south. Tampa is one of the largest cigar manufacturers and Jacksonville ships lumber and turpentine. St. Augustine, founded in 1565, is the oldest town of European origin in the U. S. Key West, exclusive resort city, is the southernmost city in the U. S. and is connected to the mainland by a unique causeway.

In 1513, Ponce de León, seeking the mythical "Fountain of Youth," was the first white man to see the state.

## GEORGIA

**Capital:** Atlanta.  
**Governor:** Samuel Marvin Griffin, Dem. (to Jan. 1959).  
**Entered Union & (rank):** Jan. 2, 1788 (4).  
**Seceded from Union:** Jan. 19, 1861.  
**Re-entered Union:** July 15, 1870.  
**Present constitution adopted:** 1945.  
**Motto:** Wisdom, justice and moderation.  
**State flower:** Cherokee rose (1916).  
**State tree:** Live oak (1937).  
**State bird:** Brown thrasher (1935).  
**State song:** "Georgia" (1922).  
**Nicknames:** Peach State; Empire State of the South.  
**Origin of name:** In honor of George II of England.  
**1940 population & (rank):** 3,123,723 (14).  
**1950 population & (rank):** 3,444,578 (13).  
**1955 estimated population:** 3,621,000.  
**Area & (rank):** 58,876 sq. mi. (20).  
**Geographic center:** In Twiggs Co., 18 mi. SE of Macon.  
**Number of counties:** 159.  
**Largest cities (1950 Census):** Atlanta (331,314); Savannah (119,638); Columbus (79,611); Augusta (71,508); Macon (70,252).  
**State forests:** 2 (2,000 ac.).  
**State parks:** 25 (32,222 ac.).  
**State general revenue (1951):** \$228,876,399.59.  
**State general allocations (1951):** \$217,110,506.78.

Georgia is typical of the changing South. The value of its factory products has passed

the value of its farm products, and industrialization is ever increasing. Atlanta is achieving importance as an industrial center. Cotton and lumber products, fertilizer, processed food and a great variety of other items are among the factory output of Macon, Augusta, Savannah and Columbus. Because of its numerous textile mills, Columbus is called the "Lowell of the South."

Georgia ranks high in cotton, tobacco, peanuts and pecans. Georgia's peaches are nationally famous. From its vast stands of pine come more than half of all U. S. resin and turpentine. The state is one of the leaders in the value of its clay products. Cattle grazing is extensive. Georgia marble is widely used.

Warm Springs has the celebrated foundation operated to aid infantile paralysis victims. It was there that President Franklin D. Roosevelt died on April 12, 1945.

Hernando de Soto, a Spaniard, in 1540, looked over the red clay of Georgia, and General James Oglethorpe founded its first British colony Feb. 12, 1733, at Savannah.

## IDAHO

**Capital:** Boise.  
**Governor:** Robert E. Smylie, Rep. (to Jan. 1959).  
**Organized as territory:** Mar. 3, 1863.  
**Entered Union & (rank):** July 3, 1890 (43).  
**Present constitution adopted:** 1890.  
**Motto:** *Esto perpetua* (It is perpetuated).  
**State flower:** Syringa (1931).  
**State tree:** White pine (1935).  
**State bird:** Mountain bluebird (1931).  
**State song:** "Here We Have Idaho."  
**Nicknames:** Gem State; Gem of the mountains.  
**Origin of name:** From a Shoshoni Indian word meaning "sunup."  
**1940 population & (rank):** 524,873 (42).  
**1950 population & (rank):** 588,637 (43).  
**1955 estimated population:** 609,000.  
**Area & (rank):** 83,557 sq. mi. (12).  
**Geographic center:** In Custer Co., 24 mi. S of W of Challis.  
**Number of counties:** 44, plus small part of Yellowstone Park.  
**Largest cities (1950 Census):** Boise (34,393); Pocatello (26,131); Idaho Falls (19,218); Twin Falls (17,600); Nampa (16,185); Lewiston (12,985).  
**State forests:** 925,000 ac.  
**State parks:** 4 (9,000 ac.).  
**State revenue (1952):** general fund, \$21,928,219.92; special funds, \$67,634,499.06.  
**State expenditure (1952):** general fund, \$19,449,181.12; special funds, \$66,491,880.24.

Idaho's huge investment in irrigation has advanced its agriculture well ahead of its mining. Idaho potatoes are eaten everywhere. The state grows apples and other fruits and wheat, corn and barley. There is light diversified manufacturing and Pocatello sells its cheese to a world market.

Idaho mines gold, silver, lead, zinc, copper and tungsten, and still has vast undeveloped mineral wealth. In its rugged central mountains is an area that is reachable only by pack horse. The forests of the state, cover-

ing at least one-third of the area, account for the fact that lumbering is extensive.

Tourist trade is important. Hunting and fishing are excellent. Sun Valley is a famed resort and attracts countless tourists to its swimming and skiing facilities.

Lewis and Clark visited Idaho in 1805 but real settlement began with the gold strike of 1860.

## ILLINOIS

**Capital:** Springfield.

**Governor:** William G. Stratton, Rep. (to Jan. 1957).

**Organized as territory:** Feb. 3, 1809.

**Entered Union & (rank):** Dec. 3, 1818 (21).

**Present constitution adopted:** 1870.

**Motto:** State sovereignty, national union.

**State flower:** Violet (1908).

**State tree:** Oak (1908).

**State bird:** Cardinal (1929).

**State song:** "Illinois" (1925).

**Nickname:** Prairie State.

**Origin of name:** From an Indian word and French suffix meaning "tribe of superior men."

**1940 population & (rank):** 7,897,241 (3).

**1950 population & (rank):** 8,712,176 (4).

**1955 estimated population:** 9,361,000.

**Area & (rank):** 56,400 sq. mi. (23).

**Geographic center:** In Logan Co., 28 mi. NE of Springfield.

**Number of counties:** 102.

**Largest cities (1950 Census):** Chicago (3,620,962); Peoria (111,856); Rockford (92,927);

East St. Louis (82,295); Springfield (81,628).

**State forests:** 3 (10,278 ac.).

**State parks, memorials, conservation areas:** 63 (28,000 ac.).

**State general revenue (1954-55):** \$765,234,627.

**State general expenditure (1954-55):** \$677,256,275.

Illinois anchors the Midwest like a rich giant, versatile in every big wealth-making industry. It stands high in manufacturing, coal mining, farm cash income, oil production. The sprawling Chicago district (including a slice of Indiana) is a great iron and steel producer, meat packer, grain exchange and railroad center. Chicago is also a busy long-flight airport city and Great Lakes port area. The Illinois sand and gravel business is exceeded only by that of California.

In agriculture, Illinois is first in soy beans and high in corn, oats, wheat, barley, rye, potatoes and truck vegetables. Hog raising and dairying are important industries of the state.

Illinois manufactures almost everything. Railroad cars, clothing, furniture, tractors, liquor, watches and farm implements are some of the items made in its several cities. An important U. S. arsenal is located on a Mississippi island off Rock Island.

Central Illinois is noted for shrines and memorials associated with the life and works of Abraham Lincoln, greatest son of Illinois. In Springfield are the Lincoln Home and Lincoln Tomb. At New Salem State Park, 20 miles northwest of Springfield, the reconstructed village of New Salem stands as a notable Lincoln memorial.

Marquette and Joliet, in 1673, were the first known explorers of this state.

## INDIANA

**Capital:** Indianapolis.

**Governor:** George N. Craig, Rep. (to Jan. 1957).

**Organized as territory:** May 7, 1800.

**Entered Union & (rank):** Dec. 11, 1816 (19).

**Present constitution adopted:** 1851.

**Motto:** The Crossroads of America.

**State flower:** Zinnia (1931).

**State tree:** Tulip tree (1931).

**State bird:** Cardinal (1933).

**State song:** "On the Banks of the Wabash, Far Away" (1913).

**Nickname:** Hoosier State.

**Origin of name:** Meaning "land of Indians."

**1940 population & (rank):** 3,427,796 (12).

**1950 population & (rank):** 3,934,224 (12).

**1955 estimated population:** 4,330,000.

**Area & (rank):** 36,291 sq. mi. (37).

**Geographic center:** In Boone Co., 14 mi. W of N of Indianapolis.

**Number of counties:** 92.

**Largest cities (1950 Census):** Indianapolis (427,173); Gary (133,911); Ft. Wayne (133,607); Evansville (128,636); South Bend (115,911).

**State forests:** 14 (113,880.46 ac.).

**State parks:** 18 (46,764.80 ac.).

**State general revenue (1953-54):** \$358,786,715.

**State general expenditure (1953-54):** \$371,270,657.

Indiana's fifty-one-mile Michigan water-front is one of the great industrial centers of the world, turning out iron and steel and oil products to make this state a leader in manufacturing. Its cities have some of the world's largest industrial plants and their great output is further swelled by the inland factories. The list of products is endless—automobiles, farm implements, aviation and railroad equipment, sewing machines are made from iron ore mined in the Great Lakes region.

In farming the state stands high in soy beans, corn, tobacco, onions, wheat, oats, rye and tomatoes.

Indianapolis is the second largest U. S. city not on a navigable body of water. Wyandotte Cave, the second largest in the U. S., is located in Crawford County of Southern Indiana. West Baden and French Lick are well known for their mineral springs. Indiana was one of the early states to adopt the secret ballot based on the Australian system.

## IOWA

**Capital:** Des Moines.

**Governor:** Leo A. Hoegh, Rep. (to Jan. 1957).

**Organized as territory:** June 12, 1838.

**Entered Union & (rank):** Dec. 28, 1846 (29).

**Present constitution adopted:** 1857.

**Motto:** Our liberties we prize and our rights we will maintain.

**State flower:** Wild rose (1897).

**State bird:** Eastern goldfinch (1933).

**State colors:** Red, white and blue (in state flag).

**State song:** "Song of Iowa."

**Nickname:** Hawkeye State.

**Origin of name:** Probably from an Indian word meaning "this is the place."



1940 population & (rank): 2,538,268 (20).  
 1950 population & (rank): 2,621,073 (22).  
 1955 estimated population: 2,692,000.  
 Area & (rank): 56,280 sq. mi. (24).  
 Geographic center: In Story Co., 5 mi. NE of Ames.  
 Number of counties: 99.  
 Largest cities (1950 Census): Des Moines (177,-965); Sioux City (83,991); Davenport (74,-549); Cedar Rapids (72,296); Waterloo (65,198).  
 State forests: 8 (13,469 ac.).  
 State parks: 88 (28,369 ac.).  
 State general revenue (1954-55): \$119,475,887.  
 State general expenditure (1954-55): \$126,896,-250.

Iowa stands in a class by itself as an agricultural state, supplying 10% of the nation's food supply. It ranks first in livestock income, value of beef marketed, production averages of oats and popcorn, and production of hogs, chickens, eggs, corn and timothy seed. Nearly 96% of the state's total acreage is in farms, and the fertility of its soil is unsurpassed. Of all the Grade A land in the country, 25% is in Iowa.

However, the value of Iowa's manufactured products exceeds that of her agricultural products. The top industrial activity is meat packing. Des Moines fittingly leads all cities in the publication of farm journals and is also a large insurance center.

Iowa has the lowest functional illiteracy rate in the nation.

West Branch is the birthplace of Herbert Hoover, who was the first President of the U. S. to be born west of the Mississippi.

Marquette and Joliet first explored the state in 1673.

## KANSAS

Capital: Topeka.  
 Governor: Fred Hall, Rep. (to Jan. 1957).  
 Organized as territory: May 30, 1854.  
 Entered Union & (rank): Jan. 29, 1861 (34).  
 Present constitution adopted: 1861.  
 Motto: *Ad astra per aspera* (To the stars through difficulties).  
 State flower: Sunflower (1903).  
 State tree: Cottonwood (1937).  
 State bird: Western meadow lark (1937).  
 State animal: Buffalo (1955).  
 State song: "Home on the Range" (1947).  
 State march: "The Kansas March" (1935).  
 Nicknames: Sunflower State; Jayhawk State.  
 Origin of name: From a Sioux word meaning "people of the south wind."  
 1940 population & (rank): 1,801,028 (29).  
 1950 population & (rank): 1,905,299 (31).  
 1955 estimated population: 2,060,000.  
 Area & (rank): 82,276 sq. mi. (13).  
 Geographic center: In Barton Co., 15 mi. NE of Great Bend.  
 Number of counties: 105.  
 Largest cities (1950 Census): Wichita (168,279); Kansas City (129,553); Topeka (78,791); Hutchinson (33,575); Salina (26,176).  
 State forests: 1 (4,000 ac.).  
 State parks: 22 (14,394 ac.).  
 State operating revenue (1955): \$230,215,000.  
 State operating expenditure (1955): \$221,806,000.

Kansas finds its strength in wheat growing, flour milling and a variety of manufacturing enterprises. Slaughtering and meat packing are also extensively pursued. In the western part of the state, where Dodge City recalls the old days of cattle rustling, rich prairie land sprawls over a large area and gives an abundance of winter wheat and fine grazing.

Corn, sorghums, oats, barley, soy beans and potatoes are other crops. Besides oil, Kansas mines zinc, coal, salt and lead.

The state is the geographical center of the U. S., and the geodetic center of the North American continent.

Wichita, a growing industrial center, is a leader in the production of military and civilian aircraft. Kansas City is a transportation, milling, and meat-packing center.

After being dry since the Murray Liquor Law of 1881, Kansas repealed prohibition in March 1949.

Points of unusual interest in Kansas include: President Eisenhower's boyhood home and the new Eisenhower Memorial Museum at Abilene; the geographic center of the U. S. at Lebanon; John Brown's well-preserved cabin at Osawatimie; and two historic military reservations—Ft. Leavenworth and Ft. Riley.

## KENTUCKY

Capital: Frankfort.  
 Governor: A. B. Chandler, Dem. (to Dec. 1959).  
 Entered Union & (rank): June 1, 1792 (15).  
 Present constitution adopted: 1891.  
 Motto: United we stand, divided we fall.  
 State flower: Goldenrod.  
 State bird: Kentucky cardinal.  
 State song: "My Old Kentucky Home."  
 Nickname: Blue Grass State.  
 Origin of name: From an Iroquoian Indian word "Ken-tah-ten" meaning "land of tomorrow."  
 1940 population & (rank): 2,845,627 (16).  
 1950 population & (rank): 2,944,806 (19).  
 1955 estimated population: 3,005,000.  
 Area & (rank): 40,395 sq. mi. (36).  
 Geographic center: In Marion Co., 3 mi. W of N of Lebanon.  
 Number of counties: 120.  
 Largest cities (1950 Census): Louisville (369,129); Covington (64,452); Lexington (55,534); Owensboro (33,651); Paducah (32,828).  
 State forests: 3 (30,022 ac.).  
 State parks: 26 (16,888 ac.).  
 Total state revenue (1954-55): \$233,639,566.  
 Total state expenditure (1954-55): \$217,137,921.

Kentucky prides itself on producing some of the nation's best tobacco, horses and whisky. It stands high in the production of native asphalt, hemp, coal, corn, oil.

Among the manufactured items produced by its cities are furniture, aluminum ware, brooms, shoes, lumber products, machinery, textiles and iron and steel products. Besides coal and oil, important minerals are natural gas and quarry products.

Louisville, the largest city, famed for the Kentucky Derby at Churchill Downs, has a large municipal university, distills whisky and is a great cigarette maker. The Blue Grass country is the home of some of the world's finest race horses. Lexington, standing in the center of this country, is a leading tobaccoist. Mammoth Cave, with its many miles of underground passages, is one tourist attraction. Another is Kentucky Lake, 184 miles wide, the largest man-made body of water in the world.

Kentucky was credited with a star in the Confederate flag because a secessionist group in the southwest part of the state set up a short-lived government and joined the Confederacy. The legitimate government, however, remained in the Union throughout the Civil War.

Marquette and Joliet in 1673 saw Kentucky when it was the "Dark and Bloody Ground," fiercely contested by Indian tribes. Daniel Boone explored the country in 1767.

## LOUISIANA

Capital: Baton Rouge.

Governor: Earl K. Long, Dem. (to May 1960).

Organized as territory: Mar. 26, 1804.

Entered Union & (rank): Apr. 30, 1812 (18).

Seceded from Union: Jan. 26, 1861.

Re-entered Union: May 26, 1865.

Present constitution adopted: 1921.

Motto: Union, justice and confidence.

State flower: Magnolia (1900).

State bird: Pelican (unofficial).

State song: "Song of Louisiana."

Nicknames: Pelican State; Creole State; Sugar State.

Origin of name: In honor of Louis XIV of France.

1940 population & (rank): 2,363,880 (21).

1950 population & (rank): 2,683,516 (21).

1955 estimated population: 2,927,000.

Area & (rank): 48,523 sq. mi. (30).

Geographic center: In Avoyelles Parish, 3 mi. SE of Marksville.

Number of parishes (counties): 64.

Largest cities (1950 Census): New Orleans (570,445); Shreveport (127,206); Baton Rouge (125,629); Lake Charles (41,272); Monroe (38,572).

State forests: 1 (8,000 ac.).

State parks: 15 (13,323 ac.).

State general revenue (1954-55): \$524,195,238.

State general expenditure (1954-55): \$460,160,-103.

Louisiana, which still calls its counties parishes after the Spanish religious divisions, is one of the leading states in fur trapping, with a rich annual bag of mink, muskrat, opossum and raccoon pelts. Other important products are sugar cane, sweet potatoes, rice, cotton, lumber, salt, sulfur, oil, natural gas and petrochemicals.

New Orleans, home of the Mardi Gras, avoids flooding only by an expensive levee and spillway system. Her industry is making increased use of raw materials from South and Central America. The Vieux Carré, in this Old World city, called by many the

'Little Paris' of the New World, has some of the celebrated restaurants of the nation.

Louisiana has a great variety and abundance of game birds. Its state-owned wildlife sanctuaries are among the largest in the world.

Hernando de Soto, in the year 1540, is usually considered the first white man to see the state, but claims are made for Narvaez, who is reputed to have seen the state as early as 1528.

## MAINE

Capital: Augusta.

Governor: Edmund S. Muskie, Dem. (to Jan. 1959).

Entered Union & (rank): Mar. 15, 1820 (23).

Present constitution adopted: 1820.

Motto: *Dirigo* (I guide).

State flower: White pine cone and tassel (1895).

State tree: Pine tree.

State bird: Chickadee (1927).

State song: "State of Maine Song" (1937).

Nickname: Pine Tree State.

Origin of name: From the French province of Mayne.

1940 population & (rank): 847,226 (35).

1950 population & (rank): 913,774 (35).

1955 estimated population: 905,000.

Area & (rank): 33,215 sq. mi. (38).

Geographic center: In Piscataquis Co., 18 mi. N of Dover-Foxcroft.

Number of counties: 16.

Largest cities (1950 Census): Portland (77,634);

Lewiston (40,974); Bangor (31,558); Au-

burn (23,134); South Portland (21,866).

State forests: 1 (21,000 ac.).

State parks: 6 (133,042 ac.).

State general revenue (1953): \$80,001,043.

State general expenditure (1953): \$78,531,246.

Maine, the largest potato grower in the nation, is supposed to be the political barometer of the nation because it holds its general election a little more than a month before the other states, a situation that has brought forth the popular expression, "As Maine goes, so goes the nation." But considering that the state invariably votes Republican, it is evident that the nation sometimes fails to follow it.

Maine has the largest forest area in the East, some 16,783,000 acres in timberland and, as a result, pulp, paper making and lumbering are leading industries. In addition to the potato crops, hay, oats, buckwheat and apples are grown. Manufacturing includes textiles, shoes and fruit canning. Much poultry is raised.

Acadia National Park, on Mount Desert Island, approximately 50 miles southeast of Bangor, offers one of the finest examples of mountain and ocean views to be found on the Atlantic.

With 2,500 lakes, hundreds of streams and a bracing summer climate, Maine is famous as a resort state. Fishing is excellent and deer, bear and other game are plentiful. Its city of Eastport is the most easterly city in the U. S., and York was the first chartered city (in 1642) in the nation.

## MARYLAND

Capital: Annapolis.  
 Governor: Theodore R. McKeldin, Rep. (to Jan. 1959).  
 Entered Union & (rank): Apr. 28, 1788 (7).  
 Present constitution adopted: 1867.  
 Motto: *Fatti maschii, parole femine* (Manly deeds, womanly words).  
 State flower: Black-eyed susan (1918).  
 State tree: White oak (1941).  
 State bird: Baltimore oriole (1882).  
 State colors: Black and gold (1904).  
 State song: "Maryland! My Maryland!" (1939).  
 Nicknames: Free State; Old Line State.  
 Origin of name: In honor of Henrietta Maria (Queen of Charles I of England).  
 1940 population & (rank): 1,821,244 (28).  
 1950 population & (rank): 2,343,001 (24).  
 1955 estimated population: 2,669,000.  
 Area & (rank): 10,577 sq. mi. (41).  
 Geographic center: In Anne Arundel Co., 3 mi. E of Collington.  
 Number of counties: 23, plus 1 independent city.  
 Largest cities (1950 Census): Baltimore (949,708); Cumberland (37,679); Hagerstown (36,260); Frederick (18,142); Salisbury (15,141).  
 State forests: 10 (119,795 ac.).  
 State parks: 13 (11,181.5 ac.).  
 State general revenue (1955): \$384,168,371.  
 State general expenditure (1955): \$386,080,568.

Maryland, a leader in vegetable canning, is cut almost in two by the upthrust of Chesapeake Bay, and with its many streams in this area, it has probably the most river frontage of any of the states. The state is one of the largest chicken raisers in the East and the Chesapeake is the largest crabbing center in the world. In addition to all kinds of vegetables, the state also grows wheat, hay, corn, potatoes and barley. Coal, sand and gravel, cement and stone are the leading mineral products.

The manufacturing products of its cities range from airplanes, steel, clothing, chemicals to meat packing. Annapolis is the site of the U. S. Naval Academy. The State House, built in 1772, is the only one built in the Colonial period which is still in regular use by a state government. Baltimore is the site of the Johns Hopkins Hospital.

The Charter of Maryland was granted in 1632 to Lord Baltimore, who died before it had passed the Great Seal; and it was issued to his oldest son, Cecil. The first settlers landed at St. Marys in 1634.

## MASSACHUSETTS

Capital: Boston.  
 Governor: Christian A. Herter, Rep. (to Jan. 1957).  
 Entered Union & (rank): Feb. 6, 1788 (6).  
 Present constitution adopted: 1780.  
 Motto: *Ense petit placidam sub libertate quietem* (By the sword we seek peace, but peace only under liberty).  
 State flower: Mayflower (1918).  
 State tree: American elm (1941).  
 State bird: Chickadee (1941).  
 State colors: Blue and gold (in flag and shield).

State song: None.

Nicknames: Bay State; Old Colony State.

Origin of name: From two Indian words meaning "great mountain place."

1940 population & (rank): 4,316,721 (8).

1950 population & (rank): 4,690,514 (9).

1955 estimated population: 5,016,000.

Area & (rank): 8,257 sq. mi. (44).

Geographic center: In Worcester Co., in N part of city of Worcester.

Number of counties: 14.

Largest cities (1950 Census): Boston (801,444).

Worcester (203,486); Springfield (162,399).

Cambridge (120,740); Fall River (111,963).

State forests: 70 (170,000 ac.).

State parks: 7 (4,792 ac.).

State general revenue (1952): \$407,352,000.

State general expenditure (1952): \$438,004,000.

Massachusetts is the leading shoe producer in the U. S., and has been one of the leaders in the making of textiles since the beginning of American history. The top-ranking industries are electrical and other machinery, leather and leather products, apparel and fabricated metals. Logan International Airport at East Boston, the nearest point in the U. S. to Europe, ranks among the world's greatest aerodromes. It has the longest commercial runway in the U. S. (10,022 ft.) and the longest air passenger terminal building in the world (3,053 ft.).

The most valuable agricultural product ranked in order of importance, are hay, tobacco, cranberries, apples, potatoes, corn and tomatoes. There is also a large livestock industry, especially poultry.

The growth of factories brought to the state an influx of foreigners and today Boston has one of the largest Irish populations in the nation. Boston became prominent as the "Cradle of Liberty" in early days and it was here that Paul Revere rode from Christ Church on Copp's Hill and the Battle of Bunker Hill was fought.

Small glacial lakes are scattered throughout the state.

The Pilgrims landed at Plymouth Rock in 1620 as the first large group to settle here, but legend has it that Eric the Red and his Norsemen saw the state in the year 1000.

## MICHIGAN

Capital: Lansing.

Governor: G. Mennen Williams, Dem. (to Jan. 1957).

Organized as territory: Jan. 11, 1805.

Entered Union & (rank): Jan. 26, 1837 (26).

Present constitution adopted: 1908.

Motto: *Si quaeris peninsulam amoenam circumspice* (If you seek a pleasant peninsula, look around you).

State flower: Apple blossom (1897).

State bird: Robin (unofficial).

State animal: Wolverine (unofficial).

State song: "Michigan, My Michigan" (unofficial).

Nickname: Wolverine State.

Origin of name: From two Indian words meaning "great lake."

1940 population & (rank): 5,256,106 (7).

1950 population & (rank): 6,371,766 (7).

1955 estimated population: 7,236,000.



Area & (rank): 58,216 sq. mi. (22).  
 Geographic center: In Wexford Co., 5 mi. W of N of Cadillac.  
 Number of counties: 83.  
 Largest cities (1950 Census): Detroit (1,849,568); Grand Rapids (176,515); Flint (163,143); Dearborn (94,994); Saginaw (92,918).  
 State forests: 23 (3,744,082 ac.).  
 State parks: 60 (178,991 ac.).  
 State general revenue (1954-55): \$787,522,861.  
 State general expenditure (1954-55): \$757,845,501.

On a map of Michigan, draw an eighty-five-mile circle around Detroit and it will contain the home plants of the companies that make nine out of ten American automobiles. This industry, which sprang up about fifty years ago from the carriage-building business, is not the only activity of this state. Airplane parts, furniture (Grand Rapids is the furniture center of the U. S.), diesel engines, hoists, pumps, boilers are among its leading items of production. Most of the nation's refrigerators are made in Michigan. On its farms are grown dry beans, grapes, peaches, potatoes, sugar beets and other food crops.

Michigan is the only state that is split completely in two parts. The northern peninsula is mining and timber country. The southern part is agricultural and manufacturing country. Connecting Lakes Superior and Huron is the busiest canal in the world—the Sault Ste. Marie. Its 11,037 inland lakes and 2,242 miles of Great Lakes shoreline make Michigan a good vacation land.

Michigan has the greatest inland fisheries in the world and markets at least 20 species from carp, trout, perch, pike to lake herring. The artificial ski jump on Iron Mountain is probably the highest in the world.

Jacques Cartier, in 1535, was the first white man to see the state.

## MINNESOTA

Capital: St. Paul.  
 Governor: Orville L. Freeman, Dem. (to Jan. 1957).  
 Organized as territory: Mar. 3, 1849.  
 Entered Union & (rank): May 11, 1858 (32).  
 Present constitution adopted: 1858.  
 Motto: *L'Étoile du Nord* (The North Star).  
 State flower: Moccasin flower (1902).  
 State tree: Norway pine.  
 State bird: None.  
 State song: "Hail Minnesota."  
 Nicknames: North Star State; Gopher State; Land of 10,000 Lakes.  
 Origin of name: From a Dakota Indian word meaning "sky-tinted water."  
 1940 population & (rank): 2,792,300 (18).  
 1950 population & (rank): 2,982,483 (18).  
 1955 estimated population: 3,174,000.  
 Area & (rank): 84,068 sq. mi. (11).  
 Geographic center: In Crow Wing Co., 10 mi. SW of Brainerd.  
 Number of counties: 87.  
 Largest cities (1950 Census): Minneapolis (521,718); St. Paul (311,349); Duluth

(104,511); Rochester (29,885); St. Cloud (28,410).  
 State forests: 32 (2,037,065 ac.).  
 State parks: 61 (84,350 ac.).  
 State general revenue (1953): \$336,329,000.  
 State general expenditure (1953): \$320,553,000.

A few square miles of Northern Minnesota, in the Mesabi, Cuyuna and Vermillion Ranges, produce most of the nation's iron ore, and provide the activity for the port of Duluth. Farm and factory are equally important in Minnesota. Its farms produce oats, butter, eggs, milk, corn, wheat, potatoes, etc. Its factory production follows the pattern of the Midwest. Machinery, furniture, foundry products, etc. are manufactured.

Minneapolis is the trade center of the Northwest. Its twin city St. Paul is the nation's biggest publisher of calendars and law books.

With over 11,000 lakes, the state is famous for its fishing, hunting and trapping.

Minnesota has many famous resort regions. Travel business for 1954 was estimated to exceed \$290 million.

In 1655, Radisson and Groseilliers, French traders from Canada, were the first white men to see the state.

## MISSISSIPPI

Capital: Jackson.  
 Governor: J. P. Coleman, Dem. (to Jan. 1960).  
 Organized as territory: Apr. 7, 1798.  
 Entered Union & (rank): Dec. 10, 1817 (20).  
 Seceded from Union: Jan. 9, 1861.  
 Re-entered Union: Feb. 23, 1870.  
 Present constitution adopted: 1890.  
 Motto: *Virtute et armis* (By valor and arms).  
 State flower: Flower or bloom of the magnolia or evergreen magnolia (1952).  
 State tree: Magnolia (1938).  
 State bird: Mockingbird (1944).  
 State song: "Way Down South in Mississippi" (1948).  
 Nickname: Magnolia State.  
 Origin of name: From an Indian word meaning "Father of Waters."  
 1940 population & (rank): 2,183,796 (23).  
 1950 population & (rank): 2,178,914 (26).  
 1955 estimated population: 2,111,000.  
 Area & (rank): 47,716 sq. mi. (31).  
 Geographic center: In Leake Co., 9 mi. N of W of Carthage.  
 Number of counties: 82.  
 Largest cities (1950 Census): Jackson (98,271); Meridian (41,893); Biloxi (37,425); Greenville (29,936); Hattiesburg (29,474).  
 State forests: 1 (1,760 ac.).  
 State parks: 10 (10,972 ac.).  
 State general revenue (1950): \$132,573,383.20.  
 State general expenditure (1950): \$134,463,877.57.

Mississippi, the stronghold of the Old South, has until the past decade been one of the least industrialized states, with more than half its population making a living from the soil. A recent program of industrialization, however, has attracted numerous manufacturing concerns. Cotton, nevertheless, is still king. The world's largest

cotton plantation of 35,000 acres is located at Scott. Other crops are corn, peanuts, oats, pecans, soybeans, rice, tung nuts, sugar cane and hay.

Mississippi's Central Hills have produced a serious soil-erosion problem due to the over-emphasis placed on cotton growing through the years. Introduction of livestock and dairying and the pasture improvement programs attendant to it have helped in recent years to remedy this situation.

Mississippi was first to ratify the 18th Amendment and is still one of the two states (the other, Oklahoma) that bans the sale of hard liquor. In 1950, it had the third largest Negro population in the U. S.

The state abounds in historical landmarks and is the home of the Vicksburg National Military Park commemorating Grant's victory on this site.

## MISSOURI

Capital: Jefferson City.

Governor: Phil M. Donnelly, Dem. (to Jan. 1957).

Organized as territory: June 4, 1812.

Entered Union & (rank): Aug. 10, 1821 (24).

Present constitution adopted: 1945.

Motto: *Salus populi suprema lex esto* (The welfare of the people shall be the supreme law).

State flower: Hawthorn (1923).

State bird: Bluebird (1927).

State colors: Red, white and blue (1913).

State song: "Missouri Waltz" (1949).

Nickname: Show-me State.

Origin of name: From an Indian word probably meaning "muddy water."

1940 population & (rank): 3,784,664 (10).

1950 population & (rank): 3,954,653 (11).

1955 estimated population: 4,128,000.

Area & (rank): 69,674 sq. mi. (18).

Geographic center: In Miller Co., 20 mi. SW of Jefferson City.

Number of counties: 114, plus 1 independent city.

Largest cities (1950 Census): St. Louis (856,796); Kansas City (456,622); St. Joseph (78,588); Springfield (66,731); University City (39,892).

State forests: 8 (163,000 ac.).

State parks: 25 (62,279 ac.).

State general revenue (1953-54): \$345,910,549.

State general expenditure (1953-54): \$329,604,449.

Missouri, touching both South and North, ranks highest in mining lead, making corn-cob pipes and breeding mules. Sometimes called the "saddle horse capital of the world" because of its excellent breeds, this state also grows corn, wheat, oats, barley, potatoes, tobacco and cotton on its fertile table land climbing to the Ozark Mountains. This country of rugged, timbered hills and deep valleys, has more than 10,000 swift-flowing streams. It produces automobiles, shoes, drugs, chemicals, beer and street cars.

Eads Bridge, spanning the Mississippi River at St. Louis, probably handles more freight cars than any other bridge in the world. Bagnell Dam, across the Osage River in the Ozarks, completed in 1931, created

one of the largest artificial lakes in the world, running for 129 miles and having shoreline that extends for approximately 1,300 miles.

The homes of two of Missouri's most publicized sons—Mark Twain and Jesse James—are tourist attractions.

Missouri, like Kentucky, had a star in the Confederate flag because a minority of the state legislature adopted an ordinance of secession. The Governor and pro-secession legislature, however, were ousted and the state remained in the Union.

## MONTANA

Capital: Helena.

Governor: J. Hugo Aronson, Rep. (to Jan. 1957).

Organized as territory: May 26, 1864.

Entered Union & (rank): Nov. 8, 1889 (41).

Present constitution adopted: 1889.

Motto: *Oro y plata* (Gold and silver).

State flower: Bitterroot (1895).

State tree: Ponderosa pine (unofficial).

State bird: Western meadow lark (1931).

State song: "Montana" (1945).

Nickname: Treasure State.

Origin of name: Chosen from Mexican dictionary by J. M. Ashley. It is a Mexicanized Spanish word.

1940 population & (rank): 559,456 (39).

1950 population & (rank): 591,024 (42).

1955 estimated population: 633,000.

Area & (rank): 147,138 (3).

Geographic center: In Fergus Co., 12 mi. W of Lewistown.

Number of counties: 56, plus small part of Yellowstone National Park.

Largest cities (1950 Census): Great Falls (39,214); Butte (33,251); Billings (31,834).

Missoula (22,485); Helena (17,581).

State forests: 7 (222,000 ac.).

State parks: 14 (2,802 ac.).

State general revenue (1953-54): \$64,987,334.

State general expenditure (1953-54): \$83,991,835.

Montana's story is the old Western story—few settlers until a gold strike in 1855 brought an influx. Mining is its present occupation, and lead, zinc, silver, coal and oil are taken from its earth.

Butte, sitting on the "richest hill in the world," is the center of the area that once supplied half of the U. S. copper (its most important mineral). Livestock, wool, lumber and dude ranching round out its interests. Agriculture in the state is dependent on irrigation.

The state as a whole still possesses the frank character of the old days, reflected in the legend that the only reason Helena was selected as the name to replace Last Chance Gulch was because of the suggestion of profanity in the front part of the name. Glacier National Park is a popular tourist area with its rugged scenery, hunting areas and dude ranches. While little development has as yet been made, Montana offers fine potentialities for winter sports. Snow conditions are good throughout the winter in the National Forest Service areas.

## NEBRASKA

Capital: Lincoln.

Governor: Victor E. Anderson, Rep. (to Jan. 1957).

Organized as territory: May 30, 1854.

Entered Union & (rank): Mar. 1, 1867 (37).

Present constitution adopted: 1875.

Motto: Equality before the law.

State flower: Goldenrod (1895).

State tree: American elm (1937).

State bird: Western meadow lark (1929).

State song: "My Nebraska" (unofficial).

Nickname: Cornhusker State.

Origin of name: From an Oto Indian word meaning "flat water."

1940 population & (rank): 1,315,834 (32).

1950 population & (rank): 1,325,510 (33).

1955 estimated population: 1,381,000.

Area & (rank): 77,237 sq. mi. (14).

Geographic center: In Custer Co., 10 mi. NW of Broken Bow.

Number of counties: 93.

Largest cities (1950 Census): Omaha (251,117);

Lincoln (98,884); Grand Island (22,682);

Hastings (20,211); North Platte (15,433).

State forests: 2.

State parks: 7 (1,036 ac.).

State general revenue (1950): \$87,098,000.

State general expenditure (1950): \$84,216,000.

Nebraska lives by its expansive sea of grain, reflected in its bumper crops of rye, corn and wheat. There are more varieties of grass growing in this state, valuable for forage, than in any other state in the nation. Its sizable cattle and hog industry help to make Omaha a great stockyard and meat-packing center. Flour, freight cars, farm machinery, precision instruments, brick and tile are products of Nebraska.

Oil was discovered in Nebraska in 1939, and natural gas in 1949. The state was 17th in oil production in the U. S. for 1954.

In 1937, Nebraska became the only state in the Union to have a unicameral (one-house) legislature. Members are elected to it without party designation.

## NEVADA

Capital: Carson City.

Governor: Charles H. Russell, Rep. (to Jan. 1959).

Organized as territory: Mar. 2, 1861.

Entered Union & (rank): Oct. 31, 1864 (36).

Present constitution adopted: 1864.

Motto: All for our country.

State flower: Sagebrush (1917).

State tree: Pinyon pine (official).

State bird: Mountain bluebird (unofficial).

State colors: Blue and silver (unofficial).

State song: "Home Means Nevada" (1933).

Nicknames: Sagebrush State; Silver State; Battle Born State.

Origin of name: Spanish: meaning "snow-clad."

1940 population & (rank): 110,247 (48).

1950 population & (rank): 160,983 (43).

1955 estimated population: 225,000.

Area & rank: 110,540 (6).

Geographic center: In Lander Co., 23 mi. SE of Austin.

Number of counties: 17.

Largest cities (1950 Census): Reno (32,497);

Las Vegas (24,624); Sparks (8,203); Elko (5,393); North Las Vegas (3,875).

State forests: None.

State parks: 8 (11,249.5 ac.).

State general revenue (1955): \$27,762,750.

State general expenditure (1955): \$29,735,553.

Nevada, the smallest state in population, had in 1950 about one and one-half persons per square mile. It was made famous by the discovery of the fabulous Comstock Lode in 1859, and has since lived mainly on its mines which give up large quantities of gold, silver, copper, lead, zinc, quicksilver and tungsten. Oil was discovered for the first time in Feb. 1954. There are also uranium deposits.

In 1931, the state created a new industry by writing an easy divorce law and Reno has since become the "divorce capital of the nation." Gambling was legalized and the gaming tables now pay a tax to add to the state's income.

Near Las Vegas, on the Colorado River, stands the Hoover Dam which has twice changed its name (Hoover to Boulder to Hoover).

The state's agricultural crop consists mainly of hay, wheat, barley and potatoes.

Nevada was the first state to use gas for capital punishment.

## NEW HAMPSHIRE

Capital: Concord.

Governor: Lane Dwinell, Rep. (to Jan. 1957).

Entered Union & (rank): June 21, 1788 (9).

Present constitution adopted: 1784.

Motto: Live free or die.

State flower: Purple lilac (1919).

State tree: White birch (1947).

State bird: None.

State song: "Old New Hampshire" (1949).

Nickname: Granite State.

Origin of name: From the English county of Hampshire.

1940 population & (rank): 491,524 (45).

1950 population & (rank): 533,242 (44).

1955 estimated population: 557,000.

Area & (rank): 9,304 sq. mi. (43).

Geographic center: In Belknap Co., 3 mi. E of Ashland.

Number of counties: 10.

Largest cities (1950 Census): Manchester (82,732); Nashua (34,669); Concord (27,988);

Portsmouth (18,830); Berlin (16,615).

State forests: 143 (55,769 ac.).

State parks: 33 (30,976 ac.).

State general revenue (1955): \$46,964,078.

State general expenditure (1955): \$58,774,503.

New Hampshire is the only state that ever played host at the formal conclusion of a foreign war when, in 1905, Portsmouth was the scene of the treaty ending the Russo-Japanese War. The sandy and stony loam of this state needs liberal fertilization for the growing of its principal crops—fruit, truck vegetables, corn, oats, hay and potatoes. Its chief manufacturing is the production of textiles, leather goods, pulp and paper products.

New Hampshire was the first state to declare its independence from Great Britain



and to adopt a constitution. Mt. Washington has recorded some of the world's strongest wind velocities, the last recording of record proportions being registered at 231 miles per hour. The state also has the largest legislative body; it varies from 375 to 400.

With 1,300 lakes and good climate for both winter sports and summer vacations, the state is highly popular as a resort area.

## NEW JERSEY

Capital: Trenton.

Governor: Robert B. Meyner, Dem. (to Jan. 1958).

Entered Union & (rank): Dec. 18, 1787 (3).

Present constitution adopted: 1947.

Motto: Liberty and prosperity.

State flower: Purple violet (1913).

State bird: Eastern goldfinch (1935).

State tree: Red oak (1950).

State colors: Blue and gold.

State song: None.

Nickname: Garden State.

Origin of name: From the Channel Isle of Jersey.

1940 population & (rank): 4,160,165 (9).

1950 population & (rank): 4,835,329 (8).

1955 estimated population: 5,420,000.

Area & (rank): 7,836 sq. mi. (45).

Geographic center: In Mercer Co., 5 mi. SE of the State capital.

Number of counties: 21.

Largest cities (1950 Census): Newark (438,776);

Jersey City (299,017); Paterson (139,336);

Trenton (128,009); Camden (124,555).

State forests: 11 (114,327 ac.).

State parks: 23 (26,825 ac.).

State general revenue (1954-55): \$438,866,553.

State general expenditure (1954-55): \$447,128,-976.

New Jersey, situated in an area of wide industrial diversification between the major markets of Philadelphia and New York, is known as the crossroads of the East. Products from over 15,000 factories and shops can be delivered overnight to about 52 million people, representing 12 states and the District of Columbia. The greatest single industry is chemicals, and New Jersey is one of the foremost research centers of the world.

Of the total land area, 43% is forested and nearly 35% is devoted to agriculture. The state rates high in practically all garden vegetables. Among its fruit crops are the famous cultivated blueberries, which originated in New Jersey. The poultry industry is one of the principal phases of the state's agriculture, and dairying occupies a prominent place.

The oldest U. S. highway of any length was built in Sussex County. The New Jersey Turnpike links New York, Pennsylvania and Delaware. Its new span at Florence over the Delaware River connects with the Pennsylvania Turnpike, giving motorists an uninterrupted road from New York to Indiana. Garden State Parkway (toll) is now open from Bergen County to Cape May (163 mi.).

Its fortunate topography and geographic location make New Jersey a popular resort state with over 100 resort areas. Wooded

hills in the north and over 55 beaches on its 120 mile seashore, from Sandy Hook to Cape May, are favorite tourist attractions. There are over 1,400 miles of trout streams. Lakes and ponds total over 800.

## NEW MEXICO

Capital: Santa Fe.

Governor: John F. Simms (to Jan. 1957).

Organized as territory: Sept. 9, 1850.

Entered Union & (rank): Jan. 6, 1912 (47).

Present constitution adopted: 1912.

Motto: *Crescit eundo* (It grows as it goes).

State flower: Yucca (1927).

State tree: Piñon (1949).

State bird: Road runner (1949).

State fish: Cutthroat trout (1955).

State colors: Flaming red and golden orange (1915).

State song: "O, Fair New Mexico" (1916).

Nicknames: Land of Enchantment; Sunshine State.

Origin of name: From the country of Mexico.

1940 population & (rank): 531,818 (42).

1950 population & (rank): 681,187 (39).

1955 estimated population: 795,000.

Area & (rank): 121,666 sq. mi. (4).

Geographic center: In Torrance Co., 12 mi. W of S of Willard.

Number of counties: 32.

Largest cities (1950 Census): Albuquerque

(96,815); Santa Fe (27,998); Roswell (25,

738); Carlsbad (17,975); Clovis (17,318).

State forests: None.

State parks: 6 (16,018 ac.).

State general revenue (1952): \$112,343,000.

State general expenditure (1952): \$106,450,000.

New Mexico's chief industries are mining and the raising of cattle and crops. Irrigation is vital.

The state contains the largest Indian reservation in the U. S. with over 16,000 acres, inhabited by the Navajo tribe. The Apaches and Utes live in three other reservations in this state (the Jicarilla Apache at Horse Lake; the Mescalero Apache, north east of Alamogordo; the Navajo, in San Juan and McKinley counties; and the Southern Ute, in the northern part of San Juan County). Carlsbad Caverns, the largest in the world, attract many visitors annually. The highest golf course in the world, over 9,000 feet above sea level, is near Alamogordo.

The state's dry and healthful climate makes it a great recuperative mecca for tuberculars. Santa Fe, the oldest seat of government in the U. S., was founded by the Spaniards in 1609-10.

Los Alamos is the site of an atomic-energy laboratory. The first atomic explosion in history was at the Alamogordo air base.

## NEW YORK

Capital: Albany.

Governor: W. Averell Harriman, Dem. (to Jan. 1959).

Entered Union & (rank): July 26, 1788 (11).

Present constitution adopted: 1777 (last revised 1938).

Motto: *Excelsior* (Ever Upward).

State flower: Rose (1955).

State tree: Sugar maple (1956).  
 State bird: Bluebird (unofficial).  
 State song: None.  
 Nickname: Empire State.  
 Origin of name: In honor of the English Duke of York.  
 1940 population & (rank): 13,479,142 (1).  
 1950 population & (rank): 14,830,192 (1).  
 1955 estimated population: 16,124,000.  
 Area & (rank): 49,576 sq. mi. (29).  
 Geographic center: In Madison Co., 6 mi. E of S of Oneida.  
 Number of counties: 62.  
 Largest cities (1950 Census): New York (7,891,-957); Buffalo (580,132); Rochester (332,-488); Syracuse (220,583); Yonkers (152,798).  
 State Forest Preserves: Adirondacks, 2,204,756 ac.; Catskills, 234,414 ac.  
 State parks: 81 (196,984 ac.).  
 State general income (1956): \$1,368,600,000.  
 State general outgo (1956): \$1,314,600,000.

New York, with the great metropolis of New York City, is the spectacular nerve center of the nation. It leads in population, manufacturing, foreign trade, commercial and financial transactions, book and magazine publishing, theatrical production, etc.

New York City is not only a national but an international leader. It is the busiest seaport in the world; New York International Airport is the largest in the world. First in manufacturing since 1824, the city today has a gigantic clothing and fur industry and also makes chemicals, paints, drugs, machinery, paper, wood and textile products and houses the tallest buildings in the world. Nearly all the rest of the state's manufacturing is done along the Hudson River north to Albany and through the Mohawk Valley and Central New York to Buffalo. It includes planes, heavy and light electrical equipment, locomotives, radio and TV sets, auto bodies and parts, washing machines, typewriters, photographic and optical equipment, shirts and flour. Dairying, truck gardening, and the raising of potatoes, onions and cabbage keep the New York farmer prosperous. Wine-making is a major industry in the state.

New York's extremely rapid commercial growth may be partly attributed to Governor De Witt Clinton who pushed through the construction of the Erie Canal (Buffalo to Albany) which was opened in 1825.

The convention and tourist business is the state's fifth greatest source of income.

For a short time, New York City was the U. S. Capital and George Washington was inaugurated there as the first President on April 30, 1789.

Henry Hudson explored New York in 1609 in his trip up the river later named in his honor. On the basis of his explorations, the Dutch bought the island of Manhattan for \$24 from the Indians in 1626.

## NORTH CAROLINA

Capital: Raleigh.  
 Governor: Luther H. Hodges, Dem. (to Jan. 1957).  
 Entered Union & (rank): Nov. 21, 1789 (12).  
 Succeeded from Union: May 20, 1861.

Re-entered Union: July 20, 1868.  
 Present constitution adopted: 1876.  
 Motto: *Esse quam videri* (To be rather than to seem) (1893).  
 State flower: Dogwood (1941).  
 State bird: Cardinal (1943).  
 State song: "The Old North State" (1927).  
 State colors: red and blue (1945).  
 Nickname: Tar Heel State.  
 Origin of name: In honor of Charles I of England.  
 1940 population & (rank): 3,571,623 (11).  
 1950 population & (rank): 4,061,929 (10).  
 1955 estimated population: 4,285,000.  
 Area & (rank): 52,712 sq. mi. (27).  
 Geographic center: In Chatham Co., 10 mi. NW of Sanford.  
 Number of counties: 100.  
 Largest cities (1950 Census): Charlotte (134,-042); Winston-Salem (87,811); Greensboro (74,389); Durham (71,311); Raleigh (65,679).  
 State forests: 1.  
 State parks: 10 (35,164 ac.).  
 State revenue (all funds) (1954-55): \$313,930,-886.  
 State expenditure (all funds) (1954-55): \$330,-178,232.

North Carolina is the nation's largest tobacco and textile producer. It holds first place in the Southeast in population and in the value of its industrial and agricultural production. This production is highly diversified, with furniture, chemicals and paper constituting enormous industries. Tobacco, corn, cotton, hay, peanuts and truck and vegetable crops are of major importance.

The state leads the South in social and economic reforms. Its educational pay scale is the same for white and Negro teachers.

There are 28 state and national parks and forests, including the Great Smoky Mountains National Park, the Blue Ridge Parkway and the new Cape Hatteras National Seashore. Mt. Mitchell, on the Parkway near Asheville, is the highest mountain in the Eastern U. S. (6,684 ft. above sea level).

The largest military reservation in the U. S. (Fort Bragg) and the largest Marine amphibious training base (Camp LeJeune) are in North Carolina.

The first English colony in America was established on Roanoke Island in 1585. Virginia Dare, born there in 1587, was the first child of English parentage born in America.

## NORTH DAKOTA

Capital: Bismarck.  
 Governor: C. Norman Brundsdale, Rep. (to Jan. 1957).  
 Organized as territory: Mar. 2, 1861.  
 Entered Union & (rank): Nov. 2, 1889 (39).  
 Present constitution adopted: 1889.  
 Motto: Liberty and union, now and forever: one and inseparable.  
 State flower: Wild prairie rose (1907).  
 State tree: American elm (1947).  
 State bird: Western meadow lark (1947).  
 State song: "North Dakota Hymn" (1947).  
 Nickname: Sioux State; Flickertail State.  
 Origin of name: From the Dakotah tribe, meaning "allies."  
 1940 population & (rank): 641,935 (39).

1950 population & (rank): 619,636 (41).  
 1955 estimated population: 642,000.  
 Area & (rank): 70,665 sq. mi. (16).  
 Geographic center: In Sheridan Co., 5 mi. SW of McClusky.  
 Number of counties: 53.  
 Largest cities (1950 Census): Fargo (38,256); Grand Forks (26,836); Minot (22,032); Bismarck (18,640); Jamestown (10,697).  
 State forests: None.  
 State parks: 5 (2,981 ac.).  
 State collections (1955): \$60,162,232.  
 State disbursements (1955): \$60,108,524.

North Dakota, politically progressive, operates the only state-owned bank, flour mill and grain elevator in the nation. The state owes its main activity to agriculture with over 87 per cent of its acreage devoted to the growth of barley, wheat, rye, oats and livestock. Most of its manufacturing consists of dairy products.

The finest farming land is in the Red River Valley, celebrated in song. Cattle raising is centered in the Missouri Valley.

"Number One Northern Hard," a wheat first grown in this state, still brings premium prices for its excellence of quality.

The completion of Garrison Dam on the Missouri River will result in extensive irrigation and the production of 400,000 kw. of electricity for use in the Missouri Basin areas.

In 1951, oil was discovered near Tioga by the Amerada Petroleum Corp. Geologists believe that the state holds two-thirds of our lignite.

The geographic center of the North American continent is located in Pierce County, latitude 48°10'N, longitude 100°10'W.

## OHIO

Capital: Columbus.  
 Governor: Frank J. Lausche, Dem. (to Jan. 1957).  
 Entered Union & (rank): Mar. 1, 1803 (17).  
 Present constitution adopted: 1851.  
 Motto: *Imperium in imperio* (An empire within an empire) (unofficial).  
 State flower: Scarlet carnation (1904).  
 State bird: Cardinal (1933).  
 State song: None.  
 Nickname: Buckeye State.  
 Origin of name: From an Iroquoian word meaning "great river."  
 1940 population & (rank): 6,907,612 (4).  
 1950 population & (rank): 7,946,627 (5).  
 1955 estimated population: 8,966,000.  
 Area & (rank): 41,222 sq. mi. (34).  
 Geographic center: In Delaware Co., 25 mi. N of Columbus.  
 Number of counties: 88.  
 Largest cities (1950 Census): Cleveland (914,808); Cincinnati (503,998); Columbus (375,901); Toledo (303,616); Akron (274,605).  
 State forests: 20 (145,281 ac.).  
 State parks: 55 (22,074 ac.).  
 State general revenue (1955): \$1,019,740,516.  
 State general expenditure (1955): \$994,774,021.

With vast coal and oil fields on the one hand, with Great Lakes iron ore close by on the other, Ohio automatically developed

into one of the nation's greatest industrial states. The vast and varied factory output of its cities runs from wire, nails, nuts, bolts, paper, radios, cash registers, golf club refrigerators to motors of all kinds and sizes. Cleveland is one of the world's largest handlers of iron ore. Toledo is the nation's largest shipper of coal. Akron makes most of the automobile tires used in the U. S.

Ohio's thousands of factories almost overshadow its importance in two other basic industries—mining and agriculture. Its fertile soil produces soy beans, corn, wheat, grapes and tobacco. Dairying and greenhouse products are important. Mining is centered in coal, oil, sand, gravel and clay.

Ohio has sent to the White House eight men, six of whom were elected from the state and two of whom were born in Ohio but elected from other states.

In 1749, Céleron, a French officer, reached the Ohio River from Canada and claimed the area for the French, disregarding the grants of the British Kings.

## OKLAHOMA

Capital: Oklahoma City.  
 Governor: Raymond D. Gary, Dem. (to Jan. 1959).  
 Organized as territory: May 2, 1890.  
 Entered Union & (rank): Nov. 16, 1907 (46).  
 Present constitution adopted: 1907.  
 Motto: *Labor omnia vincit* (Labor conquers all things).  
 State flower: Mistletoe (1893).  
 State tree: Redbud (1937).  
 State bird: Scissor-tailed Flycatcher (1951).  
 State colors: Green and white (1915).  
 State song: "Oklahoma" (Rodgers-Hammerstein) (1953).  
 Nickname: Sooner State.  
 Origin of name: From two Choctaw Indian words meaning "red people."  
 1940 population & (rank): 2,336,434 (22).  
 1950 population & (rank): 2,233,351 (25).  
 1955 estimated population: 2,168,000.  
 Area & (rank): 69,919 sq. mi. (17).  
 Geographic center: In Oklahoma Co., 8 mi. S of Oklahoma City.  
 Number of counties: 77.  
 Largest cities (1950 Census): Oklahoma City (243,504); Tulsa (182,740); Muskogee (37,289); Enid (36,017); Lawton (34,757).  
 State forests: None.  
 State parks: 14 (52,086 ac.).  
 State general revenue (1955): \$313,951,414.  
 State general expenditure (1955): \$310,004,958.

Oil has made Oklahoma a rich state and Tulsa one of the world's wealthiest cities per capita. The smelting of zinc, oil refining, meat packing and flour milling are its chief factory industries. Wheat, corn, oats, cotton, sorghums and potatoes are its agricultural crops of chief importance.

In 1834, Oklahoma was set aside as Indian Territory. It remained so until Apr. 22, 1889, when the first opening to homestead settlement occurred. On that one day, 50,000 people swarmed in, and the term "sooners" was born to apply to those who had sneaked into the state sooner than the noon deadline. A series of land openings by "runs" and lot



teries extended through 1901, and sales by sealed bid of remaining lands were held in 1906 and 1910.

The state is one of the two in the nation (the other is Mississippi) which prohibits the sale of hard liquor.

## OREGON

**Capital:** Salem.

**Governor:** Elmo E. Smith, Rep. (to Jan. 1959).

**Organized as territory:** Aug. 14, 1848.

**Entered Union & (rank):** Feb. 14, 1859 (33).

**Present constitution adopted:** 1859.

**Motto:** The Union (unofficial).

**State flower:** Oregon grape (1899).

**State tree:** Douglas fir (1939).

**State bird:** Western meadow lark (1927).

**State song:** "Oregon, My Oregon" (1927).

**Nickname:** Beaver State.

**Origin of name:** Unknown. However, it is generally accepted that the name, first used by Jonathan Carver in 1778, was taken from the writings of Maj. Robert Rogers, an English army officer.

**1940 population & (rank):** 1,089,684 (34).

**1950 population & (rank):** 1,521,341 (32).

**1955 estimated population:** 1,669,000.

**Area & (rank):** 96,981 sq. mi. (9).

**Geographic center:** In Crook Co., 25 mi. E of S of Prineville.

**Number of counties:** 36.

**Largest cities (1950 Census):** Portland (373,628); Salem (43,140); Eugene (35,879); Medford (17,305); Corvallis (16,207).

**State forests:** 720,000 ac. in 14 counties.

**State parks:** 161 (56,024 ac.).

**State general revenue (1955):** \$192,333,000.

**State general expenditure (1955):** \$230,948,000.

Oregon, with the greatest U. S. reserve of standing timber, has a billion-dollar forestry industry. Its salmon fishing industry, centered at Astoria at the mouth of the Columbia River, is one of the world's largest.

In agriculture, the state leads in growing peppermint, holly, lily bulbs, caneberrries, alfalfa, Blue Lake beans and cover seed crops, and also raises strawberries, hops, wheat and other grains, sugar beets, potatoes, green peas, fiber flax, dairy products, livestock and poultry.

Oregon's coast is lush and green with heavy rainfall and is noted for its scenic beauty. Crater Lake National Park, Mount Hood and Bonneville Dam on the Columbia are other tourist attractions.

With the low-cost electric power provided by Bonneville Dam, McNary Dam and other dams in the Pacific Northwest, Oregon has developed steadily as a manufacturing state. Leading manufactures are lumber and lumber products, metalwork, machinery, aluminum, chemicals and paper.

## PENNSYLVANIA

**Capital:** Harrisburg.

**Governor:** George M. Leader, Dem. (to Jan. 1959).

**Entered Union & (rank):** Dec. 12, 1787 (2).

**Present constitution adopted:** 1874.

**Motto:** Virtue, liberty and independence.

**State flower:** Mountain laurel (1933).

**State tree:** Hemlock (1931).

**State bird:** Ruffed grouse (1931).

**State colors:** Blue and gold.

**State song:** None.

**Nickname:** Keystone State.

**Origin of name:** In honor of Adm. Sir William Penn, father of William Penn. It means "Penn's Woodland."

**1940 population & (rank):** 9,900,180 (2).

**1950 population & (rank):** 10,498,012 (3).

**1955 estimated population:** 11,159,000.

**Area & (rank):** 45,333 sq. mi. (32).

**Geographic center:** In Center Co., 2 1/2 mi. SW of Bellefonte.

**Number of counties:** 67.

**Largest cities (1950 Census):** Philadelphia (2,071,605); Pittsburgh (676,806); Erie (130,803); Scranton (125,536); Reading (109,320).

**State forests:** 20 (1,857,447 ac.).

**State parks:** 45 (72,000 ac.).

**State revenue (Est. 1954-55):** \$1,358,288,000.

**State expenditure (Est. 1954-55):** \$1,273,000,000.

From the steel mills of Pittsburgh through the mid-state coal mines and oil wells to the shipyards and factories of Philadelphia, Pennsylvania bristles with heavy industry. Approximately 30% of all American iron and steel is made in Pennsylvania. Other manufactures include locomotives, boilers, engines, blast furnaces, trucks, busses, wire, textiles, knit goods and nylon and rayon products. Virtually all of the U. S. anthracite (hard coal) deposits are located in Pennsylvania.

Agricultural products include apples, peaches, potatoes, corn, hay, barley, wheat, buckwheat and tobacco.

Pennsylvania is rich in historical lore. Philadelphia was the seat of the Federal government almost continuously from 1776 until 1800, and there the Declaration of Independence was signed and the Constitution drawn up. Valley Forge, of the Revolution, and Gettysburg, the turning-point of the Civil War, are both in Pennsylvania. The Liberty Bell stands in Independence Square in Philadelphia.

Henry Hudson sailed into Delaware Bay in 1609. In 1681, William Penn, the Quaker, founded its first colony.

## RHODE ISLAND

**Capital:** Providence.

**Governor:** Dennis J. Roberts, Dem. (to Jan. 1957).

**Entered Union & (rank):** May 29, 1790 (13).

**Present constitution adopted:** 1843.

**Motto:** Hope.

**State flower:** Violet (unofficial).

**State tree:** Maple (unofficial).

**State bird:** Rhode Island Red (official).

**State colors:** Blue, white and gold (in state flag).

**Song:** "Rhode Island" (1946).

**Nickname:** Little Rhody.

**Origin of name:** From the Greek island of Rhodes.

**1940 population & (rank):** 731,346 (36).

**1950 population & (rank):** 791,896 (36).

**1955 estimated population:** 845,000.

Area & (rank): 1,214 sq. mi. (48).  
 Geographic center: In Kent Co., 2.8 mi. S. by W. of Crompton.  
 Number of counties: 5.  
 Largest cities (1950 Census): Providence (248,674); Pawtucket (81,436); Cranston (55,060); Woonsocket (50,211); Warwick (43,028).  
 State forests: 9 (15,600 ac.).  
 State parks: 11 (5,700 ac.).  
 State general revenue (1955): \$67,211,154.  
 State general expenditure (1955): \$67,889,244.

Rhode Island, with the greatest density of population barring the District of Columbia, boasts the highest proportion of industrial workers of all the states. Leading industry is textiles, largely concentrated in Pawtucket, Providence and Woonsocket.

Providence is also one of the largest U. S. jewelry centers, and is important in the production of machinery and metal products.

With more than eight-tenths of the population living in urban areas, adjacent parts of the state are interested in dairying, poultry and truck farming. Potatoes, corn, apples, oats and hay lead the crop list. Of the state's land area, about one-seventh is farm cropland and open pasture; two-thirds is forested.

Newport is the site of the Naval War College and was long a show place for the luxurious summer homes built by some of New York's wealthiest people. The U. S. Naval Air Station is at Quonset in the town of North Kingstown.

Roger Williams founded Providence, and subsequently Rhode Island, in 1636 after he had been banished from Massachusetts for nonconformance to religious doctrine.

## SOUTH CAROLINA

Capital: Columbia.  
 Governor: George B. Timmerman, Jr., Dem. (to Jan. 1959).  
 Entered Union & (rank): May 23, 1788 (8).  
 Seceded from Union: Dec. 20, 1860.  
 Re-entered Union: July 18, 1868.  
 Present constitution adopted: 1895.  
 Mottos: *Animus opibusque parati* (Prepared in minds and resources) and *Dum spiro spero* (While I breathe, I hope).  
 State flower: Carolina yellow jessamine (1924).  
 State tree: Palmetto tree (1939).  
 State bird: Carolina wren (1948).  
 State song: "Carolina" (1911).  
 Nickname: Palmetto State.  
 Origin of name: Same as for North Carolina.  
 1940 population & (rank): 1,899,804 (26).  
 1950 population & (rank): 2,117,027 (27).  
 1955 estimated population: 2,283,000.  
 Area & (rank): 31,055 sq. mi. (39).  
 Geographic center: In Richland Co., 13 mi. SE of Columbia.  
 Number of counties: 46.  
 Largest cities (1950 Census): Columbia (86,914); Charleston (70,174); Greenville (58,161); Spartanburg (36,795); Rock Hill (24,502).  
 State forests: 4 (123,000 ac.).  
 State parks: 22 (46,000 ac.).  
 State total revenue (1953-54): \$160,824,000.  
 State general expenditure (1953-54): \$156,094,000.

Once primarily agricultural, South Carolina has built so many big cotton textile mills that today the state's factories doubt the output of its farms in cash value. Agriculture has not, however, been completely replaced and today its chief crops are cotton, tobacco, peaches, corn, hay, oats, sweet potatoes and peanuts which are enhanced by the recent development of modern soil conservation methods. Charleston makes bestos, wood, pulp and steel products.

Civil War hostilities were started in the state at Charleston, when, on April 12, 1861, South Carolina men bombarded and captured Fort Sumter. In Charleston harbor the first submarine was used in warfare.

Vasquez de Ayllon, who came from San Domingo with about 500 settlers in 1521, made the first attempt to colonize this state, but the expedition was later wiped out by Indians. In succeeding years, Spanish attempts were successful.

## SOUTH DAKOTA

Capital: Pierre.  
 Governor: Joseph J. Foss, Rep. (to Jan. 1957).  
 Organized as territory: Mar. 2, 1861.  
 Entered Union & (rank): Nov. 2, 1889 (40).  
 Present constitution adopted: 1889.  
 Motto: Under God the people rule.  
 State flower: American pasqueflower (1903).  
 State tree: Black Hills spruce (1947).  
 State bird: Ring-necked pheasant (1943).  
 State animal: Coyote (1949).  
 State colors: Blue and gold (in state flag).  
 State song: "Hail! South Dakota" (1943).  
 Nicknames: Sunshine State; Coyote State.  
 Origin of name: Same as for North Dakota.  
 1940 population & (rank): 642,961 (38).  
 1950 population & (rank): 652,740 (40).  
 1955 estimated population: 677,000.  
 Area & (rank): 77,047 sq. mi. (15).  
 Geographic center: In Hughes Co., 8 mi. N. of Pierre.  
 Number of counties: 67.  
 Largest cities (1950 Census): Sioux Falls (52,696); Rapid City (25,310); Aberdeen (21,051); Huron (12,788); Watertown (12,699).  
 State forests: 4 (86,000 ac.).  
 State parks: 10 (80,000 ac.).  
 State general revenue (1955): \$79,472,099.  
 State general expenditure (1955): \$78,995,108.

\* The acreage shown includes 46 recreation areas and 31 roadside parks in addition to the 10 state parks.  
 † Does not include \$5,934,000 in bond payments.

Seventy-five per cent of the population South Dakota is actively interested in agriculture. Its leading crops are rye, barley, oats, corn, wheat. Cattle raising and dairying are its stronger industries. The richest U. S. gold mine, the Homestake, is at Lead.

The Black Hills, a great tourist attraction, are the highest mountains east of the Rockies. Mt. Rushmore, in this group, celebrated for the likenesses of Washington, Jefferson, Lincoln and Theodore Roosevelt, which were carved in stone by the late Gutzon Borglum. The Badlands offer very scenic masses of bare rock and clay unrelieved by any vegetation. It was in this state that the Sioux Indians, angered at the influx of the white men who were searching

ing for gold, started the hostilities which ended in Custer's Massacre, on June 25, 1876, in Montana.

## TENNESSEE

Capital: Nashville.  
Governor: Frank G. Clement, Dem. (to Jan. 1959).

Entered Union & (rank): June 1, 1796 (16).

Seceded from Union: June 24, 1861.

Re-entered Union: July 24, 1866.

Present constitution adopted: 1870, amended for first time 1953.

Motto: Agriculture, commerce.

State flower: Iris (1933).

State tree: Tulip poplar (1947).

State bird: Mockingbird (1933).

Songs: "My Homeland, Tennessee" (1925)

and "When It's Iris Time in Tennessee" (1935).

Nickname: Volunteer State.

Origin of name: From the name of the ancient capital of the Cherokee tribe.

1940 population & (rank): 2,915,841 (15).

1950 population & (rank): 3,291,718 (16).

1955 estimated population: 3,417,000.

Area & (rank): 42,246 sq. mi. (33).

Geographic center: In Rutherford Co., 5 mi. NE of Murfreesboro.

Number of counties: 95.

Largest cities (1950 Census): Memphis (396,000); Nashville (174,307); Chattanooga (131,041); Knoxville (124,769); Jackson (30,207).

State forests: 13 (143,742 ac.).

State parks: 17 (125,318 ac.).

State general revenue (1954-55): \$276,111,880.

State general expenditure (1954-55): \$273,385,966.

Tennessee won world prominence in 1945, for the atom bomb was made possible by the Clinton Engineer Works at Oak Ridge.

The state is now predominately industrial, with production including chemicals, food, textiles, virgin aluminum, shoes, lumber products, and metal work. Mineral products include phosphates, zinc, copper, lead, sinter iron, pyrites, high-grade pottery clay, coal and marble. Tennessee's agricultural production includes livestock, cotton, corn, tobacco, hay, dairy products, poultry and eggs.

Tennessee is the home of TVA which operates 29 dams and distributes power from 3 dams on the Cumberland River maintained by the Army Corps of Engineers. Benefits of flood control, navigation and electrical power reach into 6 other states (Kentucky, Alabama, North Carolina, Georgia, Virginia, and Mississippi). The Tennessee River, already the most completely used major river in the world, is insufficient to supply energy needs, and the power system is being doubled by use of steam generating plants.

## TEXAS

Capital: Austin.

Governor: Allan Shivers, Dem. (to Jan. 1957).

Entered Union & (rank): Dec. 29, 1845 (28).

Seceded from Union: Mar. 2, 1861.

Re-entered Union: Mar. 30, 1870.

Present constitution adopted: 1876.

Motto: Friendship.

State flower: Bluebonnet (1901).

State tree: Pecan (1919).

State bird: Mockingbird (1927).

State song: "Texas, Our Texas" (1930).

Nickname: Lone Star State.

Origin of name: From an Indian word meaning "friends."

1940 population & (rank): 6,414,824 (6).

1950 population & (rank): 7,711,194 (6).

1955 estimated population: 8,563,000.

Area & (rank): 267,339 sq. mi. (1).

Geographic center: In McCulloch Co., 20 mi. NE of Brady.

Number of counties: 254.

Largest cities (1950 Census): Houston (596,153); Dallas (434,462); San Antonio (408,442); Fort Worth (278,778); Austin (132,459).

State forests: 5 (6,510 ac.).

State parks: 48.

State revenue receipts (1954-55): \$838,548,955.

State governmental cost (1954-55): \$777,243,167.

Big, sprawling, vigorous Texas, comprising one-twelfth of the entire area of the United States, is the richest political subdivision in the world with the possible exception of the Russian Ukraine, and is the only state that may, by Congressional statute, divide into five parts if it so desires. There is very little possibility of this ever being done because Texas and Texans live by its bigness. Texas is a natural leader in oil, natural gas, cotton, cattle, helium, sulfur, sheep, wool, onions and turkeys.

The distance from El Paso to Beaumont is a greater distance than from New York to Chicago. Texas supports possibly the most ardent local enthusiasts in the nation, who are always quick to boast of her.

Over the Neches River, at Port Arthur, is the most elevated highway bridge in the world.

Cabeza de Vaca explored the state in 1528. Since 1685, it has been under the jurisdiction of 6 separate governments: those of France, Spain, Mexico, the Republic of Texas, the Confederacy and the United States.

## UTAH

Capital: Salt Lake City.

Governor: J. Bracken Lee, Rep. (to Jan. 1957).

Organized as territory: Sept. 9, 1850.

Entered Union & (rank): Jan. 4, 1896 (45).

Present constitution adopted: 1896.

Motto: Industry.

State flower: Sego lily (1911).

State tree: Blue spruce (1933).

State bird: Seagull (1955).

State emblem: Beehive.

State song: "Utah, We Love Thee."

Nickname: Beehive State.

Origin of name: From the Ute tribe, meaning "people of the mountains."

1940 population & (rank): 550,310 (41).

1950 population & (rank): 688,862 (38).

1955 estimated population: 781,000.

Area & (rank): 84,916 sq. mi. (10).

Geographic center: In Sanpete Co., 3 mi. N of Manti.

Number of counties: 29.



**Largest cities (1950 Census):** Salt Lake City (182,121); Ogden (57,112); Provo (28,937); Logan (16,832); Murray (9,006).

**State forests:** None.

**State parks:** 3 (10 ac.).

**State general revenue (1954-55):** \$110,629,406.\*

**State general expenditure (1954-55):** \$115,672,-422.\*

\* State began period with \$36,800,519 balance or surplus; finished with \$31,267,503.

Utah, rich in natural resources, has long been recognized for its copper, gold, silver, lead and zinc. Also, it produces all the elements necessary for the manufacture of steel: iron, lime, dolomite, fluorspar, manganese and coal for coking. Uranium mining has recently become a major industry. The state is also developing an oil industry, and this resource may become a major factor in Utah's economy.

Utah's crops requiring extensive irrigation include sugar beets, potatoes, hay, onions and wheat. Various garden crops, such as beans, peas and tomatoes, and fruits, such as pears, peaches, apples and apricots, make up an ever-growing industry. Eggs and commercial poultry are also among the products of Utah.

Brigham Young led the Mormons into the area in 1847. Six times in the next forty years, the area applied for statehood and was refused because polygamy was practiced. In 1896, when polygamy was abandoned by the Mormon Church, Utah was admitted into the Union.

Great Salt Lake, lying in the north central area, has long been a world wonder. It has no known outlet, and its salt content is about six times that of the ocean.

## VERMONT

**Capital:** Montpelier.

**Governor:** Joseph B. Johnson, Rep. (to Jan. 1957).

**Entered Union & (rank):** Mar. 4, 1791 (14).

**Present constitution adopted:** 1793.

**Motto:** Vermont—freedom and unity.

**State flower:** Red clover (1894).

**State tree:** Sugar maple (1949).

**State bird:** Hermit thrush (1941).

**State song:** "Hail to Vermont" (1937).

**Nickname:** Green Mountain State.

**Origin of name:** From the French, meaning "green mountain."

**1940 population & (rank):** 359,231 (46).

**1950 population & (rank):** 377,747 (45).

**1955 estimated population:** 378,000.

**Area & (rank):** 9,609 sq. mi. (42).

**Geographic center:** In Washington Co., 4.5 mi. SSE of Roxbury Village.

**Number of counties:** 14.

**Largest cities (1950 Census):** Burlington (33,155); Rutland (17,659); Barre (10,922); Montpelier (8,599); St. Albans (8,552).

**State forests:** 24 (68,936 ac.).

**State parks:** 21 (6,226 ac.).

**State revenue (1954):** \$44,865,773.

**State expenditure (1954):** \$49,352,123.

Vermont, the only New England state without a seacoast (and the last to be settled because of this), leads the nation in

marble, granite, asbestos and maple syrup production. In ratio to population it keeps more dairy cows than any other state. Vermont's soil is devoted to dairying, truck farming and fruit growing, its rugged area precluding extensive farming. This same quality, however, along with a bracing dry climate, makes the state popular as a summer resort and as a center of winter sports. Two-thirds of the total land area of the state is classified as forest land.

From 1777 to 1791, Vermont was an independent state of indefinite status with some national perquisites and then was the first state after the original thirteen to join the Union. It was also the first state to forbid slavery and the first to adopt universal manhood suffrage (1777). Vermont has been Republican since 1854; only Georgia on the Democratic side ties that record for consistency.

## VIRGINIA

**Capital:** Richmond.

**Governor:** Thomas B. Stanley, Dem. (to Jan. 1958).

**Entered Union & (rank):** June 25, 1788 (10).

**Succeeded from Union:** Apr. 17, 1861.

**Re-entered Union:** Jan. 27, 1870.

**Present constitution adopted:** 1902.

**Motto:** *Sic semper tyrannis* (Thus always to tyrants).

**State flower:** American dogwood (1918).

**State bird:** Cardinal.

**State song:** "Carry Me Back to Old Virginny" (1940).

**Nicknames:** The Old Dominion; Cavalier State.

**Origin of name:** In honor of Elizabeth, "Virgin Queen" of England.

**1940 population & (rank):** 2,677,773 (19).

**1950 population & (rank):** 3,318,680 (15).

**1955 estimated population:** 3,579,000.

**Area & (rank):** 40,815 sq. mi. (35).

**Geographic center:** In Appomattox Co., 11 mi. S of E of Amherst.

**Number of counties:** 98, plus 32 independent cities.

**Largest cities (1950 Census):** Richmond (230,310); Norfolk (213,513); Roanoke (91,921); Portsmouth (80,039); Alexandria (61,787).

**State forests:** 6 (45,072 ac.).

**State parks:** 8 (24,073 ac.).

**State revenue (1955):** \$415,285,633.

**State expenditure (1955):** \$411,240,662.

The history of America is closely tied to that of Virginia, particularly in the colonial period. Jamestown, founded in 1607, was the first permanent English settlement in North America, and slavery was introduced there in 1619. The surrenders ending both the American Revolution and the Civil War occurred in Virginia. The state is called the "Mother of Presidents" because 8 chief executives of the U. S. were born there.

Points of historic interest include Mount Vernon and other places associated with Washington; Monticello, home of Jefferson; Stratford, home of the Lees; Richmond, capital of the Confederacy and of Virginia; and Williamsburg, the restored Colonial capital.

Among Virginia's natural wonders are the famous Natural Bridge and the limestone caverns of the Shenandoah Valley. The most important natural resources are beds of bituminous coal, forest lands, oyster beds and commercial fisheries.

Manufacturing includes chemicals, textiles, lumber and wood products, foods, transportation equipment (including shipbuilding), apparel and furniture. Agricultural products include livestock, poultry, dairy goods, tobacco, apples, grains and hay crops.

## WASHINGTON

Capital: Olympia.

Governor: Arthur B. Langlie, Rep. (to Jan. 1957).

Organized as territory: Mar. 2, 1853.

Entered Union & (rank): Nov. 11, 1889 (42).

Present constitution adopted: 1889.

Motto: *Al-Ki* (Indian word meaning Bye and Bye).

State flower: Rhododendron (1949).

State tree: Hemlock (1947).

State bird: Goldfinch (1951).

State colors: Green and gold (1925).

State song: "Washington's Song" (1909).

Nicknames: Evergreen State; Chinook State.

Origin of name: In honor of Geo. Washington.

1940 population & (rank): 1,736,191 (30).

1950 population & (rank): 2,378,963 (23).

1955 estimated population: 2,570,000.

Area & (rank): 68,192 sq. mi. (19).

Geographic center: In Chelan Co., 10 mi. S of W of Wenatchee.

Number of counties: 39.

Largest cities (1950 Census): Seattle (467,591);

Spokane (161,721); Tacoma (143,673);

Yakima (38,486); Bellingham (34,112).

State forests: 2 (290,000 ac.).

State parks: 75 (60,000 ac.).

State general revenue funds (1954-55): \$410,738,000.

State general expenditure (1954-55): \$415,014,000.

Washington is one of the leaders in lumber production. Its rugged surface is rich in stands of Douglas fir, yellow and white pine, spruce, larch and cedar. The state's other first is apples. Food and lumber products and a wide variety of goods flow from Washington factories.

The Columbia River contains one third of the potential water power of America. Largest dam is Grand Coulee, greatest power producer in the world. Other mighty dams on the Columbia include Chief Joseph, Rock Island, Bonneville, McNary and The Dalles, which are shared with Oregon. There are 96 dams in Washington, built for various purposes including power, irrigation, flood control, water storage, etc.

The Hanford Engineer Works, north of Pasco, has been set up as the world's first full-scale plant for atom bombs.

## WEST VIRGINIA

Capital: Charleston.

Governor: William C. Marland, Dem. (to Jan. 1957).

Entered Union & (rank): June 20, 1863 (35).

Present constitution adopted: 1872.

Motto: *Montani semper liberi* (Mountaineers always free).

State flower: Rhododendron (1903).

State tree: Sugar maple (1949).

State bird: Cardinal (1949).

State animal: Black bear.

State colors: Blue and gold (unofficial).

State songs: "West Virginia, My Home Sweet Home" (approved 1947 as one of songs of state); "West Virginia Hills" (by custom).

Nickname: Mountain State.

Origin of name: Same as for Virginia.

1940 population & (rank): 1,901,974 (25).

1950 population & (rank): 2,005,552 (29).

1955 estimated population: 2,002,000.

Area & (rank): 24,181 sq. mi. (40).

Geographic center: In Braxton Co., 4 mi. E of Sutton.

Number of counties: 55.

Largest cities (1950 Census): Huntington (86,353); Charleston (73,501); Wheeling (58,891); Clarksburg (32,014); Parkersburg (29,684).

State forests: 10 (96,418 ac.).

State parks: 21 (38,752 ac.).

State general revenue (1955-56): \$110,415,538.

State general expenditure (1955-56): \$110,808,984.

Mountainous West Virginia is the coal mining leader of the nation. Geologists believe that if all other U. S. coal mines shut down, West Virginia alone could supply the country for 250 years with its deposits of bituminous (soft) coal. The state also ranks high in natural gas, oil, quarry products and hardwood lumber. Cattle is the main product. Leading crops include wheat, corn, oats, hay, tobacco and fruit.

West Virginia was created when its residents refused to secede from the Union and severed itself from Virginia during the Civil War era.

Like many mountain states, West Virginia has an equable climate without extremes. White Sulphur Springs, in Greenbrier County, is a famous health resort. Mountain streams give the state one of the highest U. S. water-power potentials.

## WISCONSIN

Capital: Madison.

Governor: Walter J. Kohler, Rep. (to Jan. 1957).

Organized as territory: Apr. 20, 1836.

Entered Union & (rank): May 29, 1848 (30).

Present constitution adopted: 1873.

Motto: Forward.

State flower: Violet.

State tree: Sugar maple.

State bird: Robin.

State animal: Badger.

State fish: Musky (Muskellunge).

State song: "On Wisconsin" (unofficial).

Nickname: Badger State.

Origin of name: French corruption of an Indian word meaning "gathering of waters."

1940 population & (rank): 3,137,587 (13).

1950 population & (rank): 3,434,575 (14).

1955 estimated population: 3,694,000.

Area & (rank): 56,154 sq. mi. (25).

Geographic center: In Wood Co., 9 mi. SE of Marshfield.

Number of counties: 71.

Largest cities (1950 Census): Milwaukee (637,392); Madison (96,056); Racine (71,193); Kenosha (54,368); Green Bay (52,735).

State forests: 7 (293,789 ac.).

State parks: 29 (16,895 ac.).

State total net revenue, all funds (1954-55): \$390,145,121.

State total net expenditure, all funds (1954-55): \$384,067,270.

Wisconsin leads the U. S. in milk and cheese production. In 1955, the state produced 13% of the nation's total output of milk. Other important farm products are: potatoes, cabbage, maple sugar, cranberries and cherries. The state ranks first in producing peas, corn and beets for canning.

About 40 years ago Wisconsin's forests became exhausted, but in recent years phenomenal strides in reforestation have been made. The chief industrial products of the state are automobiles, machinery, furniture, paper and beer.

Wisconsin pioneered in social legislation, providing pensions for the blind (1907), aid to dependent children (1913) and old-age assistance (1925). In 1932, it was the first state to enact an unemployment compensation law. In labor legislation, the state has also pioneered in important laws, among them the first workmen's compensation law actually to take effect. Wisconsin had the first state-wide primary-election law and the first successful income-tax law.

## WYOMING

Capital: Cheyenne.

Governor: Milward L. Simpson, Rep. (to Jan. 1959).

Organized as territory: July 25, 1868.

Entered Union & (rank): July 10, 1890 (44).

Present constitution adopted: 1890.

Motto: *Cedant arma togae* (Let arms yield to the gown).

State flower: Indian paintbrush (1917).

State tree: Cottonwood (1947).

State bird: Meadow lark (1927).

State insignia: Bucking horse (unofficial).

State song: "Wyoming State Song" (unofficial).

Special legal holiday: Arbor Day (by governor's designation).

Nickname: Equality State.

Origin of name: From the Indian, meaning "mountains and valleys alternating"; named after the Wyoming Valley in Pa.

1940 population & (rank): 250,742 (47).

1950 population & (rank): 290,529 (47).

1955 estimated population: 306,000.

Area & (rank): 97,914 sq. mi. (8).

Geographic center: In Fremont Co., 58 mi. N of E of Lander.

Number of counties: 23, plus Yellowstone National Park.

Largest cities (1950 Census): Cheyenne (31,935); Casper (23,673); Laramie (15,581);

Sheridan (11,500); Rock Springs (10,857).

State forests: None.

State parks: 2 (1,060 ac.).

State general revenue (1949-50): \$42,246,000.

State general expenditure (1949-50): \$41,618,000.

Wealthy in wool, cattle, oil and coal Wyoming was first in U. S. history to insure woman's place in politics. In 1869, it gave women the vote and Mrs. Nellie Tayloe Ross, who held office in 1925-27, was the first U. S. woman governor.

Second in mean elevation to Colorado Wyoming has many lures for the tourist trade, notably Yellowstone National Park. Cheyenne is famous for its annual "Frontier Days" celebration, which brings in visitors from everywhere. One of the world's largest subbituminous coal fields lies near Gillette. Big game hunting is good in many parts of the state.

## SELF-GOVERNING U. S. TERRITORIES

### ALASKA

Capital: Juneau.

Governor: B. Frank Heintzleman (to Apr. 1957).

Organized as territory: 1912.

Territorial flower: Forget-me-not.

Territorial bird: Willow ptarmigan.

Territorial song: "Alaska's Flag."

Origin of name: Corruption of native word meaning "great country."

1939 population: 72,524.

1950 population: 128,643.

1954 estimated population: 159,000.

1939-50 population change: +77.4%.

Area: 586,400 sq. mi. (incl. Aleutians).

Geographic center (including islands): 95 mi. south of Fort Gibbon.

Largest cities (estimated 1955): Anchorage (30,000); Fairbanks (10,500); Ketchikan (7,500); Juneau (6,200).

Alaska, the biggest of U. S. possessions (including the Aleutian Islands) was called

"Seward's Folly" in 1867, when that Secretary of State arranged for its purchase from Russia for \$7,200,000. Since then Alaska has returned approximately \$3,500,000,000 worth of products to the U. S.

Canned salmon is Alaska's principal product. It mines gold, supplies all domestically mined U. S. tin and also turns out platinum, coal, antimony, silver, mercury, tungsten and chromium.

The Pribilof Islands, in the Bering Sea are famous as the breeding ground of the Alaska fur seal, which is under careful government control. Beaver, muskrat, otter, mink and other furs also abound. Alaska's first pulp mill, constructed at a cost of \$5 million, began operation in 1954.

Mt. McKinley, in the south central part is 20,300 feet high, the tallest peak in North America. With its wild interior, still partly unexplored, this territory is a hunter's paradise. With only one person for every four square miles, Alaska is by far the most thin-



settled of U. S. lands. Sitka was its capital until 1912.

Alaska has magnificent glaciers and active volcanoes. Winter temperatures in the interior have been known to register 78° below zero. However, summer temperatures in the same area have been recorded at 99° above zero; and large parts of the territory, especially in the southeast, enjoy mild climate in both summer and winter.

Alaska's Governor is appointed by the President to a 4-year term, and there is a locally elected 2-house legislature. The territory's elected delegate to the U. S. House of Representatives has floor privileges but no vote. Legislation is pending in Congress for the admission of Alaska as a state.

The Aleutians include the following island groups (and major islands): Fox Islands (Unimak, Akutan, Unalaska, Umnak); Islands of the Four Mountains (Chuginadak, Kagamil, Carlisle, Herbert); Andreanof Islands (Atka, Tanaga, Adak, Kanaga); Rat Islands (Kiska, Amchitka, Semisopochnoi, Rat); Near Islands (Agattu, Attu). In June 1942, the Japanese occupied Attu and Kiska. However, Attu was retaken by the U. S. in May 1943; Kiska was evacuated by the Japanese in Aug. 1943 after extensive shelling and bombing of the island.

Vitus Bering, a Dane working for the Russians, and Alexei Chirikov discovered Alaska and the Aleutians in 1741.

## HAWAII

Capital: Honolulu (on Oahu).

Governor: Samuel Wilder King (to Feb. 1957 \*).

Organized as territory: 1900.

Motto: *Ua Mau Ke Ea O Ka Aina I Ka Pono* (The life of the land is preserved by righteousness).

Territorial flower: Hibiscus.

Territorial song: "Hawaii Pono!" (unofficial).

Nickname: Paradise of the Pacific.

1940 population: 423,300.

1950 population: 499,794.

\* Or until a successor is appointed.

1940-50 population change: +18.1%.

1956 estimated population: 516,878.

Area: 6,454 sq. mi. (incl. outlying islands).

Counties: 4.

Largest cities (1950 Census): Honolulu (248,034); Hilo (27,198); Wahiawa (8,369), Kailua-Lanikai (7,740); Wailuku (7,424).

Hawaii, 2,100 miles west-southwest of San Francisco, is a 390-mile chain of islets and 8 main islands—Hawaii, Kahoolawe, Maui, Lanai, Molokai, Oahu, Kauai, and Niihau. Kure (Ocean) Island, an uninhabited islet in the Leeward Islands, and Palmyra, in the Line Islands, are administratively part of Hawaii.

Hawaii's temperature is mild and the soil is fertile for tropical fruits and vegetables. Cane sugar and pineapple are its chief products, approximately 75% of the world's canned pineapple being produced in the islands. Hawaii also grows coffee, rice, cotton, bananas, nuts and potatoes. Some livestock and poultry are raised. The tourist business is Hawaii's fourth largest source of income. Approximately 85% of the island's population, although racially heterogeneous, is native to the U. S.

Hawaii's highest peak, Mauna Kea, rises to 13,794 feet and is, in a sense, the world's highest mountain since it springs from an ocean floor 18,000 feet below sea level. Kilauea, on Hawaii, is one of the world's most active volcanoes. The islands have no snakes and their only native mammal is a small bat, of which there are many species.

Hawaii's Governor is appointed by the President to a 4-year term, and there is a locally elected 2-house legislature. The territory's delegate to the U. S. House of Representatives has floor privileges but no vote. Legislation is pending in Congress for the admission of Hawaii as a state.

Hawaii was discovered in 1778 by Captain James Cook, an Englishman, who named it the Sandwich Islands. It was ruled by native monarchs until 1893, thereafter as a republic until 1898, when it ceded itself to the U. S.

## COMMONWEALTH OF PUERTO RICO

Capital: San Juan.

Governor: Luis Muñoz Marín (to Jan. 1957).

Song: "La Borinqueña."

1940 population: 1,869,255.

1950 population: 2,210,703.

1940-50 population change: +18.3%.

1955 estimated population: 2,307,000.

Area: 3,423 sq. mi.

Largest cities (1950 Census): San Juan (357,205\*); Ponce (99,492); Mayagüez (58,944);

Caguas (33,759); Arecibo (28,659).

\* Includes Río Piedras (132,438), which was annexed in 1951.

Puerto Rico is an island about 95 mi. long and 36 mi. wide at the northeastern end of the Caribbean Sea. It is a self-governing Commonwealth freely and vol-

untarily associated with the U. S. Under its Constitution, a Governor and a Legislative Assembly are elected by direct vote for a 4-year period. The judiciary is vested in a Supreme Court and lower courts established by law. The people elect a Resident Commissioner to the U. S. House of Representatives, where he has a voice but no vote. The island was formerly an unincorporated territory of the U. S. after being ceded by Spain as a result of the Spanish-American War.

The Commonwealth is one of the most densely populated areas of the world, with about 674 inhabitants per square mile. However, it has one of the highest standards of living. Featuring Puerto Rican economic

development is Operation Bootstrap. This industrialization program has established over 375 new factories and has greatly increased agricultural production, transportation and communications facilities, electric power, housing, etc. Life expectancy was ex-

panded from 46 to 63 years during 1940-5. School enrollment has been doubled.

Columbus discovered the island on his second voyage to America in 1493. Ponce de León settled it for Spain by 1508, and became its first governor in 1510.

## NON SELF-GOVERNING U. S. TERRITORIES

### AMERICAN SAMOA

Capital: Pago Pago (on Tutuila Island).

Governor: (Vacant).

1940 population: 12,908.

1950 population: 18,937.

Area: 75.3 sq. mi.

American Samoa, a group of 5 volcanic islands and 2 coral atolls located some 2,400 miles south of Hawaii in the South Pacific Ocean, is administered by the Interior Dept.

By the Treaty of Berlin signed Dec. 2, 1899, and ratified Feb. 16, 1900, the U. S. was internationally acknowledged to have rights extending over all the islands of the Samoa group east of longitude 171° west of Greenwich. On Apr. 17, 1900, the chiefs of Tutuila and Aunu'u ceded those islands to the U. S. In 1904, the King and chiefs of Manu'a ceded the islands of Ofu, Olosega and Tau (composing the Manu'a group) to the U. S. Swains Island, some 200 miles north of Samoa, was included as part of the territory by Act of Congress Mar. 4, 1925; and on Feb. 20, 1929, Congress formally accepted sovereignty over the entire group and placed the responsibility for administration in the hands of the President. From 1900-51, by Presidential direction, the Department of the Navy governed the territory. On July 1, 1951, administration was transferred to the Department of the Interior.

The principal products are copra, mats, handicrafts and canned fish.

### BAKER, HOWLAND AND JARVIS

These Pacific islands were not to play a role in the extraterritorial plans of the U. S. until May 13, 1936, when the U. S. perfected its claim. President F. D. Roosevelt, at that time, placed them under the control of and jurisdiction by the Secretary of the Interior for administration purposes.

Baker Island is a saucer-shaped atoll with an area of approximately one square mile and an elevation of 20 feet. It is about 1,650 miles from Hawaii.

Howland Island, 36 miles to the northeast, is approximately one and a half miles long and half a mile wide and rises to an elevation of 18 feet.

Jarvis Island is several hundred miles to the east and is approximately two miles long by one and an eighth miles wide.

### CANAL ZONE

Headquarters: Balboa Heights, C. Z.; 21 West St., New York City.

Governor-President: Brig. Gen. William E. Potter.

1940 population: 51,827.

1950 population: 52,822.

Area: 648.01 sq. mi.

The Canal Zone is a 50-mile strip between the Atlantic and Pacific Oceans which was granted to the U. S. by the Republic of Panamá by treaty in 1903 (ratified Feb. 2, 1904). It extends roughly 5 miles on either side of the center line of the Panama Canal.

The 1903 treaty provided for the payment of \$10,000,000 by the U. S. to Panamá upon ratification of the treaty and \$250,000 in gold annually, beginning 9 years after ratification. The annual payments were increased to \$430,000 after the U. S. went off the gold standard. The annuity was increased to \$1,930,000 by the 1955 treaty.

The history of the Canal goes back to 1534 when King Charles V of Spain ordered a survey made. Construction of the waterway was formally inaugurated in Jan. 1880 by the French Canal Co. under a concession granted by New Granada (Colombia) 2 years earlier. The canal rights and properties of the second French Canal Co. were bought by the U. S. for \$40,000,000, the transfer being made May 4, 1904, in Panama City. The construction was completed 10 years later.

The Canal is 40.27 miles from shore line to shore line and 50.72 miles from deep water in the Caribbean to deep water in the Pacific. The Panama Railroad, completed in 1855, is owned by the Panama Canal Co. It roughly parallels the Canal channel, running 47.64 miles from Colón to Panama City.

The Panama Canal Locks, which provide a water bridge between the two oceans, are Gatún Locks on the Atlantic side and Pedro Miguel and Miraflores Locks on the Pacific side. They lift or lower ships 85 feet between sea level and Gatún Lake level in 3 steps on each side of the Isthmus. Each of the two chambers in every flight of locks has a usable length of 1,000 feet, and width of 110 feet and is about 70 feet deep.

The Canal Zone is, in effect, a government reservation, and in general no private enterprise is permitted except that relating directly to the operation of the waterway. The Governor, who is appointed by the U. S. President, administers the Canal Zone Government, which is charged with the civil government, including health, sanitation and protection of the Zone. The Governor is also ex officio President of the Panama Canal Company, which is a corporate agency of the U. S. charged with the operation of the Canal and related business activities.

All ships afloat, with the exception of the commercial liners of the Queen Mary class and U. S. Aircraft carriers of the Roosevelt class, can transit the Panama Canal. Prior to the beginning of World War II, work was

started on the construction of a third set of locks, which were to be much larger than existing installations.

### CANTON AND ENDERBURY

Canton and Enderbury islands, the largest of the Phoenix group, are jointly owned and supervised by the U. S. and Great Britain after an agreement signed on Apr. 6, 1939. Canton is triangular in shape and the largest of the eight islands of this group. It lies approximately 1,600 miles southwest of Hawaii in the Pacific and was discovered at the turn of the eighteenth century by U. S. whalers. It was surveyed by Commander R. W. Meade who named it after a whaler ship. It had, in 1955, a population of 279, including Europeans. Enderbury is rectangular in shape and is 2.7 miles long by one mile wide. It is unpopulated and lies about 32 miles southeast of Canton.

### GUAM

Capital: Agaña.

Governor: Richard Barrett Lowe.

1940 population: 22,290.

1950 population: 59,498.

1955 estimated population: 70,000.

Area: 225 sq. mi.

Guam, the largest of the Mariana Islands, is independent of the trusteeship assigned to the U. S. in 1947. It was acquired by the U. S. from Spain in 1898 (occupied 1899) and was placed under the Navy Department.

In World War II, Guam was seized by the Japanese on Dec. 11, 1941; but on July 27, 1944, it was once more in U. S. hands.

On Aug. 1, 1950, President Truman signed a bill which granted U. S. citizenship to the people of Guam and established self-government. However, the people do not have an elected representative in Washington, D.C., and they do not vote in national elections. The civilian Governor operates under the Department of the Interior.

Guam farmers raise all crops indigenous to a subtropical climate.

Added stimulus to Guam's economy was given by the development in 1950 of a commercial port at Apra Harbor under the administration of the Guam government.

### JOHNSTON ISLAND

This island was originally discovered by Captain Charles James Johnston of *H.M.S. Cornwallis* on Dec. 14, 1807. On July 27, 1858, it was claimed by Hawaii and became a possession of the U. S. The island is about 600 miles southwest of Hawaii and about  $1\frac{1}{2}$  miles long by half a mile wide.

### KINGMAN REEF

This reef was discovered by Captain W. E. Kingman in Nov. 1853 and is the smallest land of U. S. sovereignty. It is 150 feet long by 120 feet wide at high tide. At low tide, two other islets of this atoll appear. It is approximately 1,000 miles south of Hawaii.

KURE (OCEAN) ISLAND. See HAWAII

### MIDWAY

Midway, lying about 1,200 miles west-northwest of Hawaii, was discovered by Captain N. C. Brooks of the Hawaiian bark *Gambia* on July 5, 1859, in the name of the U. S. It was formally declared a U. S. possession in 1867, and in 1903 Theodore Roosevelt made it a naval reservation.

Sand and Eastern Islands, with 850 acres and 328 acres respectively, are its largest individual islands. In 1935 Midway became a stopover for commercial transpacific flights. Commercial activities ceased in 1950.

The total group comprises an area of 28 square miles and has no native population. The Navy Dept. maintains an installation.

### PALMYRA. See HAWAII

### VIRGIN ISLANDS OF THE U. S.

Capital: Charlotte Amalie (on St. Thomas). Governor: Walter A. Gordon.

1940 population: 24,889 (St. Croix, 12,902; St. Thomas, 11,265; St. John, 722).

1950 population: 26,665.

1940-50 population change: +7.1%.

Area: 133 sq. mi. (St. Croix, 82; St. Thomas, 32; St. John, 19).

The Virgin Islands, consisting of 9 main islands and some 75 islets, were discovered by Columbus in 1493. Since 1666, England has held 6 of the main islands; the other 3 (St. Croix, St. Thomas and St. John), as well as about 50 of the islets, were eventually acquired by Denmark, which named them the Danish West Indies. In 1917, these islands were purchased by the U. S. from Denmark for \$25 million.

Congress granted U. S. citizenship to Virgin Islanders in 1927; and, in 1931, administration was transferred from the Navy to the Department of the Interior. Universal suffrage was given in 1936 to all persons who could read and write the English language. The Governor is appointed by the President of the U. S.

About 85% of the population is Negro, and there is limited farming, fishing and cattle raising. Vegetables, citrus fruits and coconuts are raised, and the chief items of export are sugar, rum and bay rum.

### WAKE ISLAND

Wake Island, about halfway between Midway and Guam, is actually the three islets of Wilkes, Peale and Wake. They were discovered by the British in 1796 and annexed by the U. S. in 1898. The entire area comprises four square miles. In 1938, Pan American Airways established a seaplane base and it has been used as a commercial base since then. On Dec. 8, 1941, it was attacked by the Japanese, who finally took possession on Dec. 23. It was surrendered by the Japanese on Sept. 4, 1945. On Oct. 15, 1950, it was the scene of a conference between President Truman and General MacArthur.

The Civil Aeronautics Administration maintains a station on the island. There is no native population.



## U. S. Trusteeships

In 1885, Germany assumed a protectorate over the Marshall Islands; and, in 1899, she purchased the Northern Mariana and Caroline Islands from Spain. These islands were occupied by the Japanese in 1914 and were mandated to Japan by the League of Nations in 1919. On Apr. 2, 1947, the U. N. Security Council adopted and set up the Strategic Trust Territory of the Pacific Islands and assigned the Northern Marianas, Carolines and Marshall to the U. S. The measure was approved by the President, with the agreement of Congress on July 18, 1947. Administration was transferred from the Navy to the Department of the Interior on July 1, 1951. However, administration of Saipan and Tinian was transferred back to the Navy on Jan. 1, 1953. On July 17 of the same year, administration of the remaining islands of the Northern Marianas, with the exception of Rota, was also transferred back to the Navy.

The entire group comprises more than 2,000 islands, but the total land area is only 68 sq. mi., many of the islands being only tiny coral reefs. The Micronesians are the main cultural group, the inhabitants of the Northern Marianas being most advanced.

### MARIANA ISLANDS

The Mariana Islands, east of the Philippines and south of Japan, include the islands of Guam, Rota, Saipan, Tinian, Pagan, Guguan, Agrihan and Aguijan. Guam, the largest, is independent of the trusteeship, having been acquired by the U. S. from Spain in 1898. (For information on Guam, see page 237.)

Chief crops are copra and fresh fruits and vegetables.

### CAROLINE ISLANDS

The Caroline Islands, east of the Philippines and south of the Marianas, include the Yap, Truk and Palau groups and the islands of Ponape and Kusaie, as well as many coral atolls.

The islands are composed chiefly of vol-

canic rock, and their peaks rise 2,000 to 3,000 feet above sea level. Chief exports of the islands are copra, trochus and handicrafts.

### MARSHALL ISLANDS

The Marshall Islands, east of the Carolines, are divided into two chains: the western or Ralik group, including the atolls Jaluit, Kwajalein, Wotho, Bikini and Eniwetok; and the eastern or Ratak group, including the atolls Mill, Majuro, Maloelap, Wotje and Likiep.

The islands are of the coral-reef type and rise only a few feet above sea level. The chief crop is coconuts; exports include copra, tortoise shell, mother-of-pearl, etc.

Bikini and Eniwetok have been the scene of several atom-bomb tests.

## Islands Under Provisional U. S. Administration

In accordance with the Japanese peace treaty signed Sept. 8, 1951, the U. S. may propose that the U. N. assign to it, as a trusteeship, the following former Japanese territory: the Ryukyu Islands south of 29° n. lat. (largest: Okinawa); the Bonin Islands (largest: Chichi Jima); the Volcano Islands

(including Iwo Jima); Rosario Island; Pereo Vela; and Marcus Island. It was also agreed in the treaty that, until such trusteeship is actually granted, the U. S. will administer the islands. As of Sept. 1956, no action has been taken by the U. S. toward bringing about this trusteeship.

## THE 50 LARGEST CITIES OF THE CONTINENTAL U. S.

Since we planned the INFORMATION PLEASE ALMANAC as a book of national scope and interest we avoided emphasis on and identification with a single city or state, as has been characteristic of all almanacs heretofore. To obtain accurate and authoritative information we have gone to the city officials. We appreciate their co-operation.

### AKRON, OHIO

Incorporated as city: 1865.  
Mayor-Manager: Leo Berg (to Dec. 1957).  
1940 population & (rank): 244,791 (38).  
1950 population & (rank): 274,605 (39).  
1940-50 population change: +12.2%.  
1950 land area: 53.7 sq. mi.  
Altitude: 1,081 ft.  
Location: In NE part of state, on Little Cuyahoga River.  
County: Seat of Summit Co.  
Churches: 260 of all denominations.  
City-owned parks: 73 (4,400 ac.).  
Telephones (1954): 123,994 (residential).  
Television sets (1953): 123,994.\*

Radio stations (1955): AM, 4; FM, 1.  
Television stations (1955): 1.  
Assessed valuation (1954): \$676,000,000.  
City tax rate (1955): \$34.40 per \$1,000.  
Bonded debt (1954): \$11,189,000.  
Revenue (1954): \$19,649,702.  
Expenditure (1954): \$19,649,702.

\*In viewing area.

### ATLANTA, GA.

Incorporated as city: 1847.  
Mayor: William B. Hartsfield (to Jan. 1958).  
1940 population & (rank): 302,288 (28).  
1950 population & (rank): 331,314 (33).  
1954 estimated population: 467,300.

1940-50 population change: +9.6%.  
 1952 area: 126,997 sq. mi.  
 Altitude: Highest, 1,050 ft.; lowest, 940.  
 Location: In NW central part of state, near Chattahoochee River.  
 Counties: In Fulton and De Kalb Cos.; seat of Fulton Co.  
 Churches: For whites, more than 352; for Negroes, more than 270.  
 City-owned parks and parkways: 146 (2,350 ac.).  
 Telephones (April, 1954): 245,000.  
 Families with radios (1952): 202,650.  
 Television sets (1952): 158,000.  
 Radio stations: AM, 10; FM, 5.  
 Television stations: 4.  
 Assessed valuation (1954): \$723,000,000.  
 City tax rate (1955): \$26.50 per \$1,000.  
 Bonded debt (1954): \$37,050,008.  
 Revenue (1954): \$34,094,218.\*  
 Expenditure (1954): \$33,566,844.

\* Does not include \$1,538,441 brought forward from 1953.

## BALTIMORE, MD.

Incorporated as city: 1797.  
 Mayor: Thomas D'Alesandro, Jr. (to May 1959).  
 1940 population & (rank): 859,100 (7).  
 1950 population & (rank): 949,708 (6).  
 1940-50 population change: +10.5%.  
 1940 area: Land, 78.7 sq. mi.; inland water, 6.9.  
 Altitude: Highest, 490 ft.; lowest, sea level.  
 Location: On Patapsco River, about 12 mi. from Chesapeake Bay.  
 County: Independent city.  
 Churches: Roman Catholic, 72; Jewish, 57; Protestant and other, 482 (150 colored).  
 City-owned parks: 148 park areas and tracts (6,000 ac.).  
 Telephone subscribers (April 1, 1954): 220,404.  
 Radio stations: AM, 8; FM, 3.  
 Television stations: 3.  
 Assessed valuation (1955): \$2,936,005,029.  
 City tax rate (1956): \$3.13 per \$100.  
 Net bonded debt (Jan. 1, 1955): \$230,038,060.  
 Revenue (1954 budget): \$144,808,628.  
 Expenditure (1954 budget): \$137,055,693.

## BIRMINGHAM, ALA.

Incorporated as city: 1871.  
 Mayor: James W. Morgan (to Nov. 1957).  
 1940 population & (rank): 267,583 (35).  
 1950 population & (rank): 326,027 (34).  
 1940-50 population change: +21.8%.  
 1955 land area: 66.88 sq. mi.  
 Altitude: Highest, 1,052 ft.; lowest, 565.  
 Location: In N central part of state.  
 County: Seat of Jefferson Co.  
 Churches: Protestant, 491; Roman Catholic, 26; Jewish, 3.  
 City-owned parks: 66 (1,211 ac.).  
 Telephones (1955): 150,754.  
 Television sets (1954): 133,000.  
 Radio stations: AM, 11; FM, 3.  
 Television stations: 3.  
 Assessed valuation (1954): \$370,000,000.  
 City tax rate (1955): \$18 per \$1,000.  
 Net bonded debt (Sept. 1, 1954): \$18,715,899.  
 Revenue (1954): \$21,446,220.  
 Expenditure (1954): \$21,361,599.

## BOSTON, MASS.

Incorporated as city: 1822.  
 Mayor: John B. Hynes (to Jan. 1960).  
 1940 population & (rank): 770,816 (9).  
 1950 population & (rank): 801,444 (10).  
 1940-50 population change: +4.0%.  
 1940 area: Land, 46.1 sq. mi.; inland water, 19.8.  
 Altitude: Highest, 330 ft.; lowest, sea level.  
 Location: On Massachusetts Bay, at mouths of Charles and Mystic Rivers.  
 County: Seat of Suffolk Co.  
 Churches: Protestant, 253; Roman Catholic, 84; Jewish, 38; others, 74.  
 City-owned parks & parkways: 3,091.81 ac.  
 Telephones: 344,663.  
 Radio sets (Greater Boston Area): 857,549.  
 Television sets (Greater Boston Area): 792,309.  
 Radio stations: AM, 9; FM, 8.  
 Television stations: 3.  
 Assessed valuation (1954): \$1,566,676,000.  
 City tax rate (1955): \$69.80 per \$1,000.  
 Net bonded debt (1954): \$63,584,472.  
 Revenue (1954): \$188,222,441.  
 Expenditure (1954): \$176,618,297.

## BUFFALO, N. Y.

Incorporated as city: 1832.  
 Mayor: Steven Pankow (to Jan. 1958).  
 1940 population & (rank): 575,901 (14).  
 1950 population & (rank): 580,132 (15).  
 1940-50 population change: +0.7%.  
 1940 area: Land, 42.67 sq. mi.; inland water, 10.8.  
 Altitude: Highest, 680 ft.; lowest, 571.  
 Location: At east end of Lake Erie, on Niagara River.  
 County: Seat of Erie Co.  
 Churches: Protestant, 268; Roman Catholic, 82; Jewish, 16; others, 34.  
 City-owned parks: 10 large (1,137 ac.), 41 minor (116 ac.).  
 Telephones (April 1954): 293,839.  
 Radio sets: 323,942.  
 Television sets: 130,258.  
 Radio stations: AM, 7; FM, 4.  
 Television stations: 3.  
 Assessed valuation (1955): \$1,027,910,133.  
 City tax rate (1955): \$32.31 per \$1,000.  
 Bonded debt (1955): \$46,005,477.  
 Revenue (1954-55): \$61,795,638.  
 Expenditure (1954-55): \$61,795,638.

## CHICAGO, ILL.

Incorporated as city: 1837.  
 Mayor: Richard J. Daley (to Apr. 1959).  
 1940 population & (rank): 3,396,808 (2).  
 1950 population & (rank): 3,620,962 (2).  
 1940-50 population change: +6.6%.  
 1942 area: Land, 208.3 sq. mi.; inland water, 4.6.  
 Altitude: Highest, 665 ft.; lowest, 581.  
 Location: On lower west shore of Lake Michigan.  
 County: Seat of Cook Co.  
 Churches: Protestant, 1,725; Roman Catholic, 319; Jewish, 172.  
 City-owned parks: 300 (8,557 ac.).  
 Telephones (Mar. 1955): 1,640,042.  
 Radio sets (June 1, 1954): 2,315,630.

Television sets (July 30, 1955): 1,977,919.  
 Radio stations: AM, 25; FM, 22.  
 Television stations: 4.  
 Assessed valuation (1954): \$8,703,599,431.  
 City tax rate (1954): \$3.768 per \$100.  
 Gross bonded debt (1954): \$453,123,400.  
 Revenue (1954): \$629,087,972.  
 Expenditure (1954): \$601,531,847.

## CINCINNATI, OHIO

Incorporated as city: 1819.  
 Mayor: Charles P. Taft (to Nov. 1957).  
 City Manager: C. A. Harrell (Apptd. 1954).  
 1940 population & (rank): 455,610 (17).  
 1950 population & (rank): 503,998 (18).  
 1940-50 population change: +10.6%.  
 1954 land area: 76.1301 sq. mi.  
 Altitude: Highest, 960 ft.; lowest, 441.  
 Location: In SW corner of state on Ohio River.  
 County: Seat of Hamilton Co.  
 Churches: 505.  
 City-owned parks: 82 (3,751.37 ac.).  
 Telephones (1955): 333,731.\*  
 Homes with radios (1954): 293,700.\*  
 Homes with television (1954): 263,400.\*  
 Radio stations: AM, 7; FM, 2.  
 Television stations: 3.  
 Assessed valuation (1955): \$1,290,000,000.  
 City tax rate (1956): \$10.94 per \$1,000.  
 Bonded debt (1954): \$119,824,306.  
 Revenue (1954): \$47,723,076.  
 Expenditure (1954): \$36,732,035.

\* Data for Hamilton County.

## CLEVELAND, OHIO

Incorporated as city: 1836.  
 Mayor: Anthony J. Celebrezze (to Nov. 1957).  
 1940 population & (rank): 878,336 (6).  
 1950 population & (rank): 914,808 (7).  
 1940-50 population change: +4.2%.  
 1940 area: Land, 73.1 sq. mi.; inland water, 0.  
 Altitude: Highest, 865 ft.; lowest, 573.  
 Location: On Lake Erie at mouth of Cuyahoga River.  
 County: Seat of Cuyahoga Co.  
 Churches: Protestant, 377; Roman Catholic, 118; Jewish, 36; others, 6.  
 City-owned parks: 35 (2,420 ac.).  
 Telephones (Mar. 1955): 696,772.\*  
 Radio sets (1955): 1,102,500.†  
 Television sets (1955): 1,195,000.†  
 Radio stations: AM, 8; FM, 8.  
 Television stations: 3.  
 Assessed valuation (1954): \$2,365,000,000.  
 City tax rate (1955): \$32.10 per \$1,000.  
 Bonded debt (1955): \$177,743,500.  
 Revenue (1954): \$113,659,582.  
 Expenditure (1954): \$92,966,319.

\* Metropolitan area. † Greater Cleveland. ‡ In viewing area.

## COLUMBUS, OHIO

Incorporated as city: 1834.  
 Mayor: M. E. Sensenbrenner (to Jan. 1960).  
 1940 population & (rank): 306,087 (26).  
 1950 population & (rank): 375,901 (28).  
 1940-50 population change: +22.8%.  
 1954 est. population: 408,655.  
 Altitude: Highest, 900 ft.; lowest, 612.

Location: In central part of state, on Scioto River.

County: Seat of Franklin Co.  
 Churches: Protestant, 361; Roman Catholic, 33; Jewish, 6.  
 City-owned parks: 117 (1,528.34 ac.).  
 Telephones (1955): 253,772.  
 Homes with radios (1954): 166,000.  
 Television sets (1954): 153,387.  
 Radio stations: AM, 5; FM, 3.  
 Television stations: 3.  
 Assessed valuation (1955): \$781,976,640.  
 City tax rate (1955): \$23.80 per \$1,000.  
 Bonded debt (1954): \$51,175,333.  
 Revenue (1954): \$24,064,013.  
 Expenditure (1954): \$17,944,549.

## DALLAS, TEX.

Incorporated as city: 1856.  
 Mayor: R. L. Thornton (to May 1957).  
 City Manager: Elgin E. Cruik (apptd. 1952).  
 1940 population & (rank): 294,734 (31).  
 1950 population & (rank): 434,462 (22).  
 1940-50 population change: +47.4%.  
 1955 area: Land, 185.6 sq. mi.; inland water, 1.2.  
 Altitude: Highest, 685 ft.; lowest, 375.  
 Location: In NE part of state, on Trinity River.  
 County: Seat of Dallas Co.  
 Churches: 515.  
 City-owned parks: 94 (6,256 ac.).  
 Telephones: 305,162.  
 Radio sets: 231,800.  
 Television sets: 200,000.  
 Radio stations: AM, 8; FM, 3.  
 Television stations: 2.  
 Assessed valuation: (1955): \$1,004,942,020.  
 City tax rate (1955): \$2.30 per \$100.  
 Net bonded debt (Mar. 1, 1955): \$107,003,522.  
 Revenue (1954-55): \$48,172,415.  
 Expenditure (1954-55): \$48,172,415.

## DAYTON, OHIO

Incorporated as city: 1805.  
 Mayor: Henry S. Stout (to Jan. 1959).  
 City Manager: Herbert W. Starick (apptd. July 1953).  
 1940 population & (rank): 210,718 (40).  
 1950 population & (rank): 243,872 (44).  
 1940-50 population change: +15.7%.  
 1950 land area: 25.0 sq. mi.  
 Altitude: Highest, 960 ft.; lowest, 720 ft.  
 Location: In SW part of state, on Miami River.  
 County: Seat of Montgomery Co.  
 Churches: Protestant, 200; Roman Catholic, 29; Jewish, 3.  
 City-owned parks: 51 (761 ac.).  
 Telephones (1955): 180,000.  
 Radio sets (1955): 142,260.\*  
 Television sets (1955): 140,000.  
 Radio stations (1955): AM, 4; FM, 1.  
 Television stations (1955): 2.  
 Assessed valuation (1954): \$629,248,620.  
 City tax rate (1954): \$9.20 per \$1,000.†  
 Bonded debt (1954): \$26,915,200.  
 Revenue (1954): \$10,494,021 (General Fund).  
 Expenditure (1954): \$10,237,211 (General Fund).

\* Dwellings only; Metropolitan area. † Dayton also has a ½ of 1% City Income Tax on salaries and net profits of business.



**DENVER, COLO.**

Incorporated as city: 1861.  
 Mayor: Will F. Nicholson (to July 1959).  
 1940 population & (rank): 322,412 (24).  
 1950 population & (rank): 415,786 (24).  
 1940-50 population change: +29.0%.  
 1954 area: Land, 69.7 sq. mi.; inland water, 0.8.  
 Altitude: Highest, 5,470 ft.; lowest, 5,130.  
 Location: In NE central part of state, on South Platte River.  
 County: Coextensive with Denver Co.  
 Churches: Protestant, 292; Roman Catholic, 50; Jewish, 12.  
 City-owned parks: 65 (798.9 planted ac.).  
 City-owned mountain parks: 27 (13,447.6 ac.).  
 Families with telephones (1953): 150,869.  
 Families with radios: Not available.  
 Television sets: Not available.  
 Radio stations: AM, 7; FM, 3.  
 Television stations: 4.  
 Assessed valuation (1953): \$881,779,700.  
 City tax rate (1955): \$45.68 per \$1,000.  
 Bonded debt (1953): \$13,055,000.  
 Revenue (1954): \$35,074,418.  
 Expenditure (1954): \$51,025,848.

**DETROIT, MICH.**

Incorporated as city: 1824.  
 Mayor: Albert E. Cobo (to Jan. 1958).  
 1940 population & (rank): 1,623,452 (4).  
 1950 population & (rank): 1,849,568 (5).  
 1940-50 population change: +13.9%.  
 1940 area: Land 137.9 sq. mi.; inland water, 4.1.  
 Altitude: Highest, 685 ft.; lowest, 574.  
 Location: In Southeast part of state, on Detroit River.  
 County: Seat of Wayne Co.  
 Churches: Protestant, 1,000; \* Catholic, 188; Jewish, 38.  
 City-owned parks: 380 (5,581 ac.).  
 Telephones: 1,205,000.  
 Radio sets: 2,347,600.  
 Television sets: 1,466,000.  
 Radio stations: AM, 6; FM, 7.  
 Television stations: 4.  
 Assessed valuation (1955): \$4,753,021,870.  
 City tax rate (1956-57): \$22.39 per \$1,000.†  
 Net bonded debt (June 30, 1954): \$310,804,000.  
 Revenue (1954): \$355,345,448.  
 Expenditure (1954): \$350,778,483.

\* Metropolitan area. † Excludes school system.

**FORT WORTH, TEX.**

Incorporated as city: 1873.  
 Mayor: Dr. F. E. (Jack) Garrison (to Apr. 1957).  
 City Manager: J. F. Davis (apptd. 1956).  
 1940 population & (rank): 177,662 (46).  
 1950 population & (rank): 278,778 (38).  
 1940-50 population change: +56.9%.  
 1950 land area: 93.7 sq. mi.  
 Altitude: Highest, 740 ft.; lowest, 520 ft.  
 Location: In NE part of state, on Trinity River.  
 County: Seat of Tarrant Co.

Churches: Protestant, 432; Roman Catholic, 14; Jewish, 2.  
 City-owned parks: 48 (4,758.88 ac.).  
 Telephones (1955): 169,633.  
 Radio sets (1954): 150,000.  
 Television sets (1955): 94,034.  
 Radio stations (1955): AM, 6; FM, 1.  
 Television stations (1955): 1.  
 Assessed valuation (1955): \$570,000,000.  
 City tax rate (1956): \$1.78 per \$100.  
 Bonded debt (1952-53): \$52,060,753.  
 Revenue (1952-53): \$16,204,532.  
 Expenditure (1952-53): \$16,521,457.

**HOUSTON, TEX.**

Incorporated as city: 1837.  
 Mayor: Oscar F. Holcombe (to Jan. 1958).  
 1940 population & (rank): 384,514 (21).  
 1950 population & (rank): 596,163 (14).  
 1940-50 population change: +55.0%.  
 1950 area: Land, 160 sq. mi.; inland water, 0.  
 Altitude: Highest, 74 ft.; lowest, sea level.  
 Location: In SE part of state, near Gulf of Mexico.  
 County: Seat of Harris Co.  
 Churches: Over 500.  
 City-owned parks: 91 (3,372.60 ac.).  
 Telephones (1955): 382,859.  
 Radio sets: 302,700.\*  
 Television sets: 251,241.\*  
 Radio stations: AM, 8; FM, 2.  
 Television stations: 2.  
 Assessed valuation (1954): \$1,362,402,000;  
 (1955 est.): \$1,500,000,000.  
 City tax rate: \$1.975 per \$100.  
 Bonded debt (1955): \$127,613,148.  
 Revenue (1954): \$32,735,853.  
 Expenditure (1954): \$34,616,690.

\* Metropolitan area.

**INDIANAPOLIS, IND.**

Incorporated as city: 1874.  
 Mayor: Phillip L. Bayt (to Dec. 1959).  
 1940 population & (rank): 386,972 (20).  
 1950 population & (rank): 427,173 (23).  
 1940-50 population change: +10.4%.  
 1954 area: Land, 58.0 sq. mi.; inland water, 0.1.  
 Altitude: Highest, 816 ft.; lowest, 667.  
 Location: In central part of state, on West Fork of White River.  
 County: Seat of Marion County.  
 Churches: 515.  
 City-owned parks: 32 (3,519 ac.).  
 Telephones (May 1955): 257,900.  
 Radio sets: 135,780 (radio families).  
 Television sets: 156,800.  
 Radio stations: AM, 5; FM, 1.  
 Television stations: 2.  
 Assessed valuation (1953): \$708,893,550.  
 City tax rate (1956): \$5.845 per \$100.  
 Gross debt (Dec. 31, 1954): \$43,217,620.  
 Revenue (1953): \$41,460,907.  
 Expenditure (1953): \$38,254,049.

**JACKSONVILLE, FLA.**

Incorporated as city: 1832.  
 Mayor: Haydon Burns (to June 1959).  
 1940 population & (rank): 173,065 (47).  
 1950 population & (rank): 204,517 (49).

1940-50 population change: +18.2%.  
 1950 land area: 30.2 sq. mi.  
 Altitude: Highest, 25 ft.; lowest, 10 ft.  
 Location: In NE part of state, on St. Johns River near Atlantic Ocean.  
 County: Seat of Durval Co.  
 Churches: 300.  
 City-owned parks: 1,200 ac.  
 Telephones (1955): 94,000.  
 Radio stations (1955): AM, 7; FM, 2.  
 Television stations (1955): 2.  
 Assessed valuation (1955): \$350,581,280.  
 City tax rate (1955): \$13.70 per \$1,000.  
 Bonded debt (1955): \$4,508,000.  
 Revenue (1954): \$37,857,205.  
 Expenditure (1954): \$37,857,205.

## JERSEY CITY, N. J.

Incorporated as city: 1855.  
 Mayor: Bernard J. Berry (to May 1957).  
 1940 population & (rank): 301,173 (30).  
 1950 population & (rank): 299,017 (37).  
 1940-50 population change: -0.7%.  
 1940 area: Land, 14.3 sq. mi.; inland water, 7.2.  
 Altitude: Highest, 180 ft.; lowest, sea level.  
 Location: In NE part of state, on Hudson River and Upper New York Bay.  
 County: Seat of Hudson Co.  
 Churches: Protestant, 96; Roman Catholic, 39; Jewish, 17; Others, 45.  
 Telephones: 83,876.  
 Assessed valuation (1955): \$494,378,123.  
 City tax rate (1956): \$85.36 per \$1,000.  
 Bonded debt (Dec. 31, 1954): \$40,275,363.\*  
 Revenue (1954): \$48,763,743.  
 Expenditure (1954): \$49,157,926.

\* Includes bonds and notes authorized and not issued of \$3,270,863.

## KANSAS CITY, MO.

Incorporated as city: 1853.  
 Mayor: H. Roe Bartle (to Apr. 1959).  
 City Manager: L. P. Cookingham (apptd. June 1940).  
 1940 population & (rank): 399,178 (19).  
 1950 population & (rank): 456,622 (20).  
 1940-50 population change: +14.4%.  
 1950 land area: 80.6 sq. mi.  
 Altitude: Highest, 1,014 ft.; lowest, 722 ft.  
 Location: In western part of state, at conjunction of Missouri and Kansas Rivers.  
 County: Located in Jackson Clay Co.  
 Churches: Protestant, 264; Roman Catholic, 37; Jewish, 7.  
 City-owned parks: 52 (2,927 ac.).  
 Telephones (1955): 241,454.  
 Television sets (1955): 494,323.  
 Radio stations (1955): AM, 9; FM, 1.  
 Television stations (1955): 3.  
 Assessed valuation (1955): \$796,000,000.  
 City tax rate (1955-56): \$15 per \$1,000.  
 Bonded debt (Apr. 30, 1955): \$55,783,000.  
 Revenue (1955): \$25,083,589.  
 Expenditure (1955): \$27,241,776.

## LONG BEACH, CALIF.

Founded: 1880.  
 Mayor: George M. Vermillion (to July 1957).  
 City Manager: Samuel E. Vickers (apptd. 1949).

1940 population & (rank): 164,271 (53).  
 1950 population & (rank): 250,767 (41).  
 1940-50 population change: +52.7%.  
 1950 land area: 34.7 sq. mi.  
 Altitude: Highest, 47 ft.; lowest, sea level.  
 Location: On San Pedro Bay, south of Los Angeles.  
 County: In Los Angeles Co.  
 Churches: 175.  
 City-owned parks: 36 (1,627.94 ac.).  
 Telephones (1955): 144,206.  
 Radio stations (1955): AM, 3; FM, 1.  
 Television stations: None.  
 Assessed valuation (1954-55): \$461,637,880.  
 City tax rate (1955-56): \$1.36 per \$100.  
 Bonded debt (June 30, 1954): \$11,497,500.  
 Revenue (1954-55): \$55,745,680.  
 Expenditure (1954-55): \$41,871,787.

## LOS ANGELES, CALIF.

Incorporated as city: 1850.  
 Mayor: Norris Poulson (to June 1957).  
 1940 population & (rank): 1,504,277 (5).  
 1950 population & (rank): 1,970,358 (4).  
 1940-50 population change: +31.0%.  
 1954 area: 453.693 sq. mi.  
 Altitude: Highest, 5,081 ft.; lowest, sea level.  
 Location: In SW part of state, on Pacific Ocean.  
 County: Seat of Los Angeles Co.  
 Churches: 1,700.  
 City-owned parks: 110 (9,600 ac.).  
 Telephones (Jan. 1, 1955): 1,132,573.  
 Radio sets (Oct. 1954): 1,724,110.\*  
 Television sets (Feb. 1955): 2,058,196.\*  
 Radio stations (Jan. 1, 1954): AM, 25; FM, 14.\*  
 Television stations (1953): 8.  
 Assessed valuation (1954-55): \$3,055,936,214.  
 City tax rate (1955-56): \$1.8271 per \$100.  
 Gross debt (June 30, 1954): \$365,953,000.  
 Revenue (1954-55): \$331,355,334.  
 Expenditure (1954-55): \$348,368,553.

\* Metropolitan area.

## LOUISVILLE, KY.

Incorporated as city: 1828.  
 Mayor: Andrew Broadbuss (to Dec. 1957).  
 1940 population & (rank): 319,077 (25).  
 1950 population & (rank): 369,129 (30).  
 1940-50 population change: +15.7%.  
 1950 land area: 39.9 sq. mi.  
 Altitude: Highest, 761 ft.; lowest, 382 ft.  
 Location: In north central part of state, on Ohio River.  
 County: Seat of Jefferson Co.  
 Churches\*: Protestant, 474; Roman Catholic, 62; Jewish, 6.  
 City-owned parks: 7 (2,048 ac.).  
 Telephones (1955)†: 158,477.  
 Radio sets (1955): 126,660.  
 Television sets (1955)†: 157,920.  
 Radio stations (1955): AM, 7; FM, 0.  
 Television stations (1955): 2.  
 Assessed valuation (Jan. 1, 1954): \$682,062,878.  
 City tax rate (1955): \$1.50 per \$100 (city purposes only; exclusive of schools).  
 Net bonded debt (Apr. 30, 1955): \$46,766,423.  
 Revenue (1955): \$15,878,887 (general corporate purposes only).

\* Jefferson County. † Metropolitan area.

Expenditure (1955): \$15,878,887 (general corporate purposes only).

## MEMPHIS, TENN.

Incorporated as city: 1826.

Mayor: Edmund Orgill (to Jan. 1960).

1940 population & (rank): 292,942 (32).

1950 population & (rank): 396,000 (26).

1940-50 population change: +35.2%.

1950 area: Land, 121.1 sq. mi.; inland water, 11.6.

Altitude: Highest, 320 ft.; lowest, 195.

Location: In SW corner of state, on Mississippi River.

County: Seat of Shelby Co.

Churches: Roman Catholic, 18; Jewish, 7; Protestant & other, 538.

City-owned parks: 48 (1,985 ac.); playgrounds, 45.

Telephones (Apr. 1, 1954): 173,794.

Radio sets (Apr. 1, 1954): 150,126.

Television sets (Apr. 1, 1954): 125,102.

Radio stations: AM, 8; FM, 1.

Television stations: 2.

Assessed valuation (1955): \$688,761,752.

City tax rate (1953): \$1.80 per \$100.

Bonded debt (Dec. 31, 1954): \$42,863,179.

Revenue (1954): \$16,675,922.

Expenditure (1954): \$16,867,636.

## MIAMI, FLA.

Incorporated as city: 1896.

Mayor: Randall N. Christmas (to Nov. 1957).

City manager: Gen. E. A. Evans (apptd. Sept. 1, 1952).

1940 population & (rank): 172,172 (48).

1950 population & (rank): 249,276 (42).

1940-50 population change: +44.8%.

1950 area: Land, 34.19 sq. mi.; inland water, 18.45.

Altitude: Average, 10 ft.

Location: In SE part of state, on Biscayne Bay.

County: Seat of Dade Co.

Churches: 235.

City-owned parks: 26.

Telephones: 242,800.

Radio sets: 165,000.

Television sets: 125,000.

Radio stations: AM, 6; FM, 4.

Television stations: 1.

Assessed valuation (1954-55): \$634,906,680.

City tax rate (1954-55): \$22.76 per \$1,000.

Bonded debt (June 30, 1954): \$34,930,000.

Revenue (1954-55): \$21,789,845.

Expenditure (1954-55): \$21,900,388.

## MILWAUKEE, WIS.

Incorporated as city: 1846.

Mayor: Frank P. Zeidler (to Apr. 1960).

1940 population & (rank): 587,472 (13).

1950 population & (rank): 637,392 (13).

1940-50 population change: +8.5%.

1954 area: Land, 87 sq. mi.; inland water, 0.

Altitude: 581 ft.

Location: In SE part of state, on Lake Michigan.

County: Seat of Milwaukee Co.

Churches: 435.

County-owned parks: 78 (7,780 ac.).

Telephones (1954): 375,278.

Radio sets (1954): 271,490.\*

Television sets (1954): 250,545.\*

Radio stations: AM, 7; FM, 2.

Television stations: 3.

Assessed valuation (1954): \$1,495,693,680.

City tax rate (1956): \$35.07 per \$1,000.

Gross debt (Dec. 31, 1954): \$41,063,133.

Revenue (1954): \$95,419,605.

Expenditure (1955 budget): \$98,593,677.

\* Milwaukee Metropolitan Area.

## MINNEAPOLIS, MINN.

Incorporated as city: 1867.

Mayor: Eric G. Hoyer (to July 1957).

1940 population & (rank): 492,370 (16).

1950 population & (rank): 521,718 (17).

1940-50 population change: +6.0%.

1954 area: Land, 58.79 sq. mi.; inland water, 5.0.

Altitude: Highest, 945 ft.; lowest, 695.

Location: In SE central part of state, on Mississippi River.

County: Seat of Hennepin Co.

Churches: 472.

City-owned parks: 147.

Telephones (1955): 325,000.

Radio sets (1952): 410,000.

Television sets (1955): 180,000.

Radio stations: AM, 10; FM, 3.

Television stations: 5.

Assessed valuation (1953): \$341,000,000.

City tax rate (1953): \$1.48 per \$100.

Net debt (1953): \$41,771,000.

Revenue (1953): \$61,894,689.

Expenditure (1951): \$52,000,000.

## NEW ORLEANS, LA.

Incorporated as city: 1805.

Mayor: de Lesseps S. Morrison (to May 1958).

1940 population & (rank): 494,537 (15).

1950 population & (rank): 570,445 (16).

1940-50 population change: +15.3%.

1954 population: 619,000.

1954 area: Land, 199.4 sq. mi.; inland water, 164.1.

Altitude: Highest, 15 ft.; lowest, 4 below sea level.

Location: In SE part of state, between Mississippi River and Lake Pontchartrain.

Parish: Seat of Orleans Parish.

Churches: 625.

City-owned parks: 69 (1,700 ac.).

Telephones (1955): 250,491.

Radio sets (1955): 205,200.

Television sets (1955): 105,000.

Radio stations: AM, 11; FM, 4.

Television stations: 2.

Assessed valuation (1955): \$798,762,390.

City tax rate (1955): \$2.83 per \$100.

Bonded debt (Jan. 1, 1955): \$72,973,000.

Revenue (1955 budget): \$24,305,325.

Expenditure (1955 budget): \$24,305,325.

## NEW YORK, N. Y.

Chartered as "Greater New York": 1898.

Mayor: Robert F. Wagner (to Dec. 1957).

Borough Presidents: Bronx, James J. Lyons;



Brooklyn, John Cashmore; Manhattan, Hulan E. Jack; Queens, James A. Lundy; Richmond, Albert V. Maniscalco.

1940 population & (rank): 7,454,995 (1).

1950 population & (rank): 7,891,957 (1).

1940-50 population change: +5.9%.

1940 area: Land, 299.0 sq. mi.; inland water, 66.4 sq. mi.

Altitude: Highest, 430 ft.; lowest, sea level.

Counties: Consists of 5 counties: Bronx, Kings (Brooklyn), New York (Manhattan), Queens, Richmond (Staten Island).

Location: SE part of state, at mouth of Hudson River.

Churches: Protestant, 1,418; Jewish, 1,330; Roman Catholic, 525.

City-owned parks: 882 (27,144 ac.).

Telephones: 3,819,784.

Families with radios: 2,258,470.

Television sets: 4,290,000.

Radio stations: AM, 14; FM, 12.

Television stations: 6.

Assessed valuation (1954-55): \$20,277,843,482.

City tax rate (1955-56): \$3.85 per \$100.

Bonded debt (1952): \$3,488,594,455.

Revenue (1952): \$1,536,515,837.

Expenditure (1952): \$1,517,417,222.

## NEWARK, N. J.

Incorporated as city: 1836.

Mayor: Leo P. Carlin (to July 1958).

1940 population & (rank): 429,760 (18).

1950 population & (rank): 438,776 (21).

1940-50 population change: +2.1%.

1955 area: Land, 23.57 sq. mi.; inland water, 3.2.

Altitude: Highest, 273.4 ft.; lowest, sea level.

Location: In NE part of state, on Passaic River and Newark Bay.

County: Seat of Essex Co.

Churches: Protestant, 159; Roman Catholic, 41; Jewish, 32; others, 57.

City-owned parks: 38 (34.24 ac.).

County-governed parks in city: 7 (755.72 ac.).

Telephones (1955): 270,000.

Radio sets: Not available.

Radio stations: AM, 4; FM, 3.

Television stations: 1.

Assessed valuation (1955): \$718,280,549.

City tax rate (1955): \$8.43 per \$100.

Net bonded debt (1955): \$38,271,332.

Revenue (1954): \$75,832,363.

Expenditure (1954): \$71,903,467.

## NORFOLK, VA.

Incorporated as city: 1845.

Mayor: W. F. Duckworth (to Aug. 1958).

City Manager: H. H. George, 3rd (apptd. Sept. 1952).

1940 population & (rank): 144,332 (60).

1950 population & (rank): 213,513 (48).

1940-50 population change: +47.9%.

1950 land area: 28.2 sq. mi.

Location: In SE part of state, on Elizabeth River.

County: Independent city.

Churches: 310.

Telephones (1955): 99,436.

Radio stations (1955): AM, 3; FM, 1.

Television stations (1955): 1.

Assessed valuation (1955): \$282,000,000.

City tax rate (1956): \$3 per \$100.

Bonded debt (1955): \$47,000,000.

Revenue (1955 anticipated): \$28,116,221.

Expenditure (1955 budget): \$27,651,279.

## OAKLAND, CALIF.

Incorporated as city: 1854.

Mayor: Clifford E. Rishell (to June 1957).

City Manager: Wayne E. Thompson (appt. Aug. 1954).

1940 population & (rank): 302,163 (29).

1950 population & (rank): 384,575 (27).

1940-50 population change: +27.3%.

1950 land area: 53.0 sq. mi.

Altitude: Highest, 1,700 ft.; lowest, sea level.

Location: In west part of state, on east side of San Francisco Bay.

County: Seat of Alameda Co.

Churches: Protestant, 149; Roman Catholic, 21; Jewish, 3; others, 46.

City-owned parks: 943.6 ac.

Telephones (Jan. 1955): 220,701.

Radio sets (est. 1955): 340,000.

Television sets (est. 1955): 135,000.

Radio stations (1955): AM, 3; FM, 1.

Television stations (1955): 3 (Bay area).

Assessed valuation (1955): \$435,000,000.

City tax rate (1955-56): \$2.37 per \$100.

Bonded debt (1954-55): \$15,652,000.

Revenue (1953-54): \$27,245,086.

Expenditure (1953-54): \$29,476,420.

## OKLAHOMA CITY, OKLA.

Incorporated as city: 1890.

Mayor: Allen Street (to Apr. 1959).

City Manager: William Gill, Jr.

1940 population & (rank): 204,424 (42).

1950 population & (rank): 243,504 (45).

1940-50 population change: +19.1%.

1955 area: Land, 66.75 sq. mi.; inland water, 0.

Altitude: Highest, 1,276 ft.; lowest, 1,070.

Location: In central part of state, on North Canadian River.

County: Seat of Oklahoma Co.

Churches: Protestant, about 28; Roman Catholic, 13; Jewish, 2; others, 5.

City-owned parks: 82 (9.924 ac.).

Telephones (1955): 154,987.

Television sets: Not available.

Radio stations: AM, 8; FM, 1.

Television stations: 3.

Assessed valuation (1954-55): \$296,684,781.

City tax rate (1950): \$12.782 per \$1,000.

Bonded debt (1950): \$18,918,000.

Revenue (1950): \$8,784,230.64.

Expenditure (1950): \$7,935,758.79.

## OMAHA, NEBR.

Incorporated as city: 1857.

Mayor: John Rosenblatt (to May 1957).

1940 population & (rank): 223,844 (39).

1950 population & (rank): 251,117 (40).

1940-50 population change: +12.2%.

1950 land area: 40.7 sq. mi.

Altitude: Highest, 1,270 ft.

Location: In eastern part of state, on Missouri River.

County: Seat of Douglas Co.

Churches: Protestant, 130; Roman Catholic, 40; Jewish, 7.

City-owned parks: 3,000 ac.

Telephones (1954): 134,743.

Radio sets: Not available.

Television sets: Not available.

Radio stations (1955): AM, 5; FM, 0.

Television stations (1955): 2.

Assessed valuation (1955): \$421,780,116.

City tax rate (1956): \$58.26 per \$1,000.

Bonded debt (1955): \$15,860,500.

Revenue (1954): \$17,653,900.

Expenditure (1954): \$18,127,700.

## PHILADELPHIA, PA.

First charter as city: 1701.

Mayor: Richardson Dilworth (to Jan. 1960).

1940 population & (rank): 1,931,334 (3).

1950 population & (rank): 2,071,605 (3).

1940-50 population change: +7.3%.

1940 area: Land, 127.2 sq. mi.; inland water, 7.8.

Altitude: Highest, 440 ft.; lowest, sea level.

Location: In SE part of state, at junction of Schuylkill and Delaware Rivers.

County: Seat of Philadelphia Co.

Churches: Roman Catholic, 148; Jewish, 136; Protestant and other, 923.

City-owned parks: 35 (7,499.19 ac.).

Telephones (1953): 862,897.

Television sets (1953): 632,153.

Radio stations: AM, 10; FM, 7.

Television stations: 3.

Assessed valuation (1955): \$3,662,618,350.

City tax rate (1955): \$3.025 per \$100.

Net bonded debt (Jan. 1, 1955): \$497,689,247.

Revenue (1954): \$187,124,702.

Expenditure (1954): \$188,337,699.

## PITTSBURGH, PA.

Incorporated as city: 1816.

Mayor: David L. Lawrence (to Jan. 1958).

1940 population & (rank): 671,659 (10).

1950 population & (rank): 676,806 (12).

1940-50 population change: +0.8%.

1951 area: Land, 55.23 sq. mi.; inland water, 3.0.

Altitude: Highest, 1,240 ft.; lowest, 715.

Location: In SW part of state, at junction of Allegheny and Monongahela Rivers to form Ohio River.

County: Seat of Allegheny Co.

Churches: Protestant, 778; Roman Catholic, 86; Jewish, 10.

City-owned parks: 23; 9 parklets (1,970 ac.).

Telephones (1955): 293,731.

Radio sets (1955): 198,890.

Television sets (1955): 461,982.\*

Radio stations: AM, 7; FM, 2.

Television stations: 2.

Assessed valuation (1954): Land, \$411,613,575; buildings, \$701,224,268.

City tax rate (1956): Land, \$34 per \$1,000; buildings, \$17 per \$1,000.

Bonded debt (1954): \$49,421,300.

Revenue (1954): \$47,735,249.

Expenditure (1954): \$47,703,861.

\* Allegheny County.

## PORTLAND, OREG.

Incorporated as city: 1851.

Mayor: Fred L. Peterson (to Jan. 1957).

1940 population & (rank): 305,394 (27).

1950 population & (rank): 373,628 (29).

1940-50 population change: +22.3%.

1954 area: Land, 69.813 sq. mi.

Altitude: Highest, 1,073 ft.; lowest, sea level.

Location: In NW part of state, on Willamette River.

County: Seat of Multnomah Co.

Churches: Protestant, 400; Roman Catholic, 37; Jewish, 10; Buddhist, 2.

City-owned parks: 111 (5,550 ac.).

Telephones (Mar. 1, 1953): 211,468.

Radio stations: AM, 8; FM, 5.

Television stations: 3.

Assessed valuation (1954-55): \$655,520,200.

City tax rate (1954-55): \$18.60 per \$1,000.

Bonded debt (June 30, 1954): \$24,787,146.

Revenue (1953-54): \$25,726,535.

Expenditure (1953-54): \$25,789,838.

## PROVIDENCE, R. I.

Incorporated as city: 1832.

Mayor: Walter H. Reynolds (to Jan. 1957).

1940 population & (rank): 253,504 (37).

1950 population & (rank): 248,674 (43).

1940-50 population change: -1.9%.

1940 land area: 17.9 sq. mi.

Altitude: Highest, 253 ft.; lowest, sea level.

Location: In northern part of state, at head of Providence River (north arm of Narragansett Bay).

County: Seat of Providence Co.

Churches: Protestant, 94; Roman Catholic, 31.

City-owned parks: 33 (815 ac.).

Radio stations: AM, 7; FM, 6.

Television stations: 2.

City tax rate (1956): \$33 per \$1,000.

Net bonded debt (Sept. 30, 1954): \$42,763,991.

Revenue (1954-55 est. budget): \$30,476,837.

Expenditure (1954-55 est. budget): \$30,448,534.

## RICHMOND, VA.

Incorporated as city: 1782.

Mayor: F. Henry Garber (to June 1958).

City Manager: Horace H. Edwards (Apptd. 1954).

1940 population & (rank): 193,042 (45).

1950 population & (rank): 230,310 (46).

1940-50 population change: +19.3%.

1951 area: 39.89 sq. mi.

Altitude: Highest, 312 ft.; lowest, 0.

Location: In east central part of state, on James River.

County: Administratively independent.

Churches: Protestant, 201; Roman Catholic, 13; Jewish, 5; others, 74.

City-owned parks\*: 62 (1,108 ac.).

Radio stations: AM, 6; FM, 4.

Television stations: 1.

Assessed valuation (1954): \$502,282,398.

City tax rate (1956): Real, \$1.88 per \$100; personal, \$2.20 per \$100; machinery, \$1 per \$100.

Net bonded debt (June 30, 1955): \$40,960,343.†

Revenue (1953-54): \$30,008,577.

Expenditure (1953-54): \$29,723,669.

\* Including 37 playgrounds and 11 athletic fields.  
† Estimate.

**ROCHESTER, N. Y.**

Incorporated as city: 1834.  
 Mayor: Peter Barry (Dec. 1957).  
 City Manager: Robert P. Aex (apptd. 1954).  
 1940 population & (rank): 324,975 (23).  
 1950 population & (rank): 332,488 (32).  
 1940-50 population change: +2.3%.  
 1953 area: Land, 34.8 sq. mi.; inland water, 0.5.  
 Altitude: Highest, 655 ft.; lowest, 246 ft.  
 Location: In west part of state, on Genesee River.  
 County: Seat of Monroe Co.  
 Churches: Protestant, 128; Roman Catholic, 38; Jewish, 19; others, 22.  
 City-owned parks: 23 (2,000 ac.).  
 Telephones (1953): 185,000.  
 Radio sets (1953): 335,000.  
 Television sets (1953): 210,000.  
 Radio stations: AM, 6; FM, 2.  
 Television stations: 2.  
 Assessed valuation (1954): \$629,535,471.  
 City tax rate (1956): \$34.60 per \$1,000.  
 Bonded debt (Dec. 31, 1953): \$9,362,000.  
 Revenue (1953): \$40,929,874.  
 Expenditure (1953): \$38,444,125.

**ST. LOUIS, MO.**

Incorporated as city: 1822.  
 Mayor: Raymond R. Tucker (to Apr. 1957).  
 1940 population & (rank): 816,048 (8).  
 1950 population & (rank): 856,796 (8).  
 1940-50 population change: +5.0%.  
 1953 area: Land, 61.0 sq. mi.; inland water, 4.0.  
 Altitude: Highest, 605 ft.; lowest, 410 ft.  
 Location: On Mississippi River, 20 miles south of its conjunction with the Missouri River.  
 County: Independent city, not in county.  
 Churches: 1,043.  
 City-owned parks: 79 (2,846.61 ac.).  
 Telephones (1955): 619,000.  
 Radio sets (1954): 594,300.  
 Television sets (1953): 441,360.  
 Radio stations (1953): AM, 10; FM, 1.  
 Television stations (1953): 4.  
 Assessed valuation (1954): \$1,420,074,000.  
 City tax rate (1956): \$3.18 per \$100.  
 Bonded debt (1955): \$30,000,000.  
 Revenue (1954): \$63,619,656.  
 Expenditure (1954): \$61,530,292.

**ST. PAUL, MINN.**

Chartered as city: 1853.  
 Mayor: Joseph E. Dillon (to June 1958).  
 1940 population & (rank): 287,736 (33).  
 1950 population & (rank): 311,349 (35).  
 1940-50 population change: +8.2%.  
 1955 land area: 55.44 sq. mi.  
 Altitude: Highest, 1,045 ft.; lowest, 683.  
 Location: In SE central part of state, on Mississippi River.  
 County: Seat of Ramsey Co.  
 Churches: Protestant, 250; Catholic, 54; Jewish, 4.  
 City-owned parks: 5 (2,300 ac.).  
 Telephones (1954): 182,000.  
 Radio stations: 4.

Television stations: 3.

Assessed valuation (1953): \$206,000,000.

City tax rate (1956): \$94.39 per \$1,000.

Bonded debt (1954): Gross, \$29,216,000; net, \$16,981,058.

Revenue (1954): \$55,386,270.

Expenditure (1954): \$54,916,377.

**SAN ANTONIO, TEX.**

Incorporated as city: 1809.  
 Mayor: J. Edwin Kuykendall (to May 1957).  
 City Manager: Stephen J. Matthews (apptd. July 1955).  
 1940 population & (rank): 253,854 (36).  
 1950 population & (rank): 408,442 (25).  
 1940-50 population change: +60.9%.  
 1950 land area: 69.5 sq. mi.  
 Altitude: 728 ft.  
 Location: In south central part of state, on San Antonio River.  
 County: Seat of Bexar Co.  
 City-owned parks: Over 2,000 ac.  
 Radio stations (1955): AM, 9; FM, 4.  
 Television stations (1955): 2.  
 Assessed valuation (1954): \$669,428,110.  
 City tax rate (1955): \$1.96 per \$100.  
 Bonded debt (1954): \$16,493,000.  
 Revenue (1954): \$16,103,095.  
 Expenditure (1954): \$16,103,095.

**SAN DIEGO, CALIF.**

Incorporated as city: 1850; again in 1872.  
 Mayor: Charles C. Dail (to May 1959).  
 City Manager: O. W. Campbell (apptd. Jan. 1950).  
 1940 population & (rank): 203,341 (43).  
 1950 population & (rank): 334,387 (31).  
 1940-50 population change: +64.4%.  
 1950 land area: 99.4 sq. mi.  
 Altitude: Highest, 822 ft.; lowest, sea level.  
 Location: In south part of state, on San Diego Bay.  
 County: Seat of San Diego.  
 Churches: Roman Catholic, 25; Jewish, 3; Protestant & other, 159.  
 City-owned parks: 63 (2,507.11 ac.).  
 Telephones: 172,508.  
 Radio sets: 300,000.  
 Television sets: 160,000.  
 Radio stations: AM, 9; FM, 2.  
 Television stations: 2.  
 Assessed valuation (1954-55): \$507,691,010.  
 City tax rate (1954-55): \$1.76 per \$100.  
 Bonded debt (1953-54): \$33,002,200.  
 Revenue (1953-54): \$27,302,183.  
 Expenditure (1953-54): \$32,286,707.

**SAN FRANCISCO, CALIF.**

Incorporated as city: 1850.  
 Mayor: George Christopher (to Jan. 1960).  
 1940 population & (rank): 634,536 (12).  
 1950 population & (rank): 775,357 (11).  
 1940-50 population change: +22.2%.  
 1955 est. population: 805,000.  
 1950 area: Land, 44.6 sq. mi.; inland water, 48.5.  
 Altitude: Highest, 900 ft.; lowest, sea level.



**Location:** Between Pacific Ocean and San Francisco Bay.  
**County:** Coextensive with San Francisco Co.  
**Churches:** 422.  
**City-owned parks:** 51.  
**Telephones (1955):** 477,687 (including Presidio).  
**Homes with radios (1954):** 269,100.  
**Homes with television (1954):** 229,376.  
**Radio stations:** AM, 8; FM, 5.  
**Television stations:** 6.  
**Assessed valuation (1954-55):** Land, \$368,547,-795; improvements, \$634,445,990; tangible personal property, \$291,972,467.  
**Assessed valuation of solvent credits:** \$725,632,-886.  
**City tax rate (1955-56):** \$7.02 per \$100.  
**Bonded debt (July 1, 1955):** General city bonds, \$92,311,000; public service enterprise bonds, \$84,551,000.  
**General city revenue (1953-54):** \$137,151,212.  
**General city expenditure (1953-54):** \$135,730,407.

## SEATTLE, WASH.

**Incorporated as city:** 1869.  
**Mayor:** Gordon S. Clinton (to June 1960).  
**1940 population & (rank):** 368,302 (22).  
**1950 population & (rank):** 467,591 (19).  
**1954 est. population:** 552,500.  
**1940-50 population change:** +27.0%.  
**1954 area:** Land, 88.19 sq. mi.; inland water, 12.2.  
**Altitude:** Highest, 540 ft.; lowest, sea level.  
**Location:** In west central part of state, on Puget Sound.  
**County:** Seat of King Co.  
**Churches:** Protestant, 267; Roman Catholic, 30; Jewish, 6.  
**City-owned parks:** 183 (3,136 ac.).  
**Telephones (1955):** 304,120.  
**Homes with radios (1955):** 252,080.  
**Television sets (1955):** 422,220.  
**Radio stations:** AM, 12; FM, 3.  
**Television stations:** 3.  
**Assessed valuation (1955):** \$579,711,312.  
**City tax rate (1955):** \$52.50 per \$1,000.  
**Bonded debt\* (Dec. 31, 1954):** \$15,717,000.  
**Revenue\* (1954):** \$29,523,180.  
**Expenditure\* (1954):** \$29,819,018.

\*General; not including city-owned light, water, transit systems.

## SYRACUSE, N. Y.

**Incorporated as city:** 1848.  
**Mayor:** Donald H. Mead (to Dec. 1957).  
**1940 population & (rank):** 205,967 (41).  
**1950 population & (rank):** 220,583 (47).  
**1940-50 population change:** +7.1%.  
**1950 land area:** 25.77 sq. mi.  
**Altitude:** Highest, 840 ft.; lowest, 363.  
**Location:** Central part of state, near Oneida Lake.  
**County:** Seat of Onondaga Co.  
**Churches:** Protestant, 78; Roman Catholic, 23; Jewish, 8; others, 8.  
**City-owned parks:** 173 (2,152.37 ac.).  
**Telephones in Syracuse metropolitan area:** 142,-705.  
**Radio sets, est. (1954):** 195,000.  
**Radio stations:** AM, 5; FM, 2.

**Television stations:** 2.

**Assessed valuation (1955):** Real estate, \$376,-034,697; special franchise, \$18,446,995.  
**City tax rate (1956):** \$14.666 per \$1,000.  
**School tax rate (1956):** \$18.3372 per \$1,000.  
**Bonded debt (Dec. 31, 1954):** \$3,839,875 (includes \$2,919,875 self-liquidating water bonds).  
**Revenue (1954):** \$27,103,579.  
**Expenditure (1954):** \$25,469,748.

## TOLEDO, OHIO

**Incorporated as city:** 1837.  
**Mayor:** Ollie Czelusta (to Dec. 1957).  
**City Manager:** John J. McCarthy (apptd. June 1954).  
**1940 population & (rank):** 282,340 (34).  
**1950 population & (rank):** 303,616 (36).  
**1940-50 population change:** +7.5%.  
**1950 land area:** 38.3 sq. mi.  
**Altitude:** 587 ft.  
**Location:** In NW part of state, on Maumee River at Lake Erie.  
**County:** Seat of Lucas Co.  
**Churches:** Protestant, 258; Roman Catholic, 37; Jewish, 5.  
**City-owned parks & playgrounds:** 52 (2,197 ac.).  
**Telephones (1954):** 171,332.  
**Radio sets (1954):** 95,420.  
**Television sets (1954):** 107,100.  
**Radio stations:** AM, 4; FM, 3.  
**Television stations:** 1.  
**Assessed valuation (1954):** \$760,082,338.  
**City tax rate (1956):** \$22.74 per \$1,000.  
**Bonded debt:** All offset by trust fund.  
**Revenue (1955):** \$29,206,858.  
**Expenditure (1955):** \$25,035,180.

## WASHINGTON, D. C.

See District of Columbia, p. 217.

## WORCESTER, MASS.

**Incorporated as city:** 1780.  
**Mayor:** James D. O'Brien (to Jan. 1958).  
**City Manager:** Francis J. McGrath (apptd. Apr. 1951).  
**1940 population & (rank):** 193,694 (44).  
**1950 population & (rank):** 203,486 (50).  
**1940-50 population change:** +5.1%.  
**1954 estimated population:** 208,700.  
**1950 land area:** 37.0 sq. mi.  
**Altitude:** Highest, 1,051 ft.; lowest, 359 ft.  
**Location:** In central part of state.  
**County:** Seat of Worcester Co.  
**Churches:** Protestant, 85; Roman Catholic, 30; Jewish, 10.  
**City-owned parks:** 52 (1,319 ac.).  
**Telephones (1955):** 82,782.  
**Radio sets (1955):** 137,453.  
**Television sets (1955):** 54,981.  
**Radio stations (1955):** AM, 4; FM, 1.  
**Television stations (1955):** 1.  
**Assessed valuation (1955):** \$340,000,000.  
**City tax rate (1955):** \$56 per \$1,000.  
**Bonded debt (Apr. 1, 1955):** \$26,831,000.  
**Revenue (1955):** \$31,074,356.  
**Expenditure (1955):** \$31,074,355.

# Tabulated Data on State Governments

Source: Questionnaires to the states.

State	GOVERNOR		LEGISLATURE <sup>1</sup>					HIGHEST COURT <sup>2</sup>			
	Term	Annual salary	Membership U <sup>3</sup> L <sup>4</sup>		Term U <sup>3</sup> L <sup>4</sup>		Salaries of members <sup>5</sup>		Members	Term	Annual salary
Alabama.....	4 <sup>6</sup>	\$12,000	35	106	4	4	\$	30 per diem	7	6	\$12,000
Arizona.....	2	15,000	28	80	2	2		8 per diem <sup>19</sup>	5	6	12,500
Arkansas.....	2	10,000	35	100	4	2		1,200 per biennium	7	8	9,000
California.....	4	25,000	40	80	4	2		6,000 per annum	7	12	21,000 <sup>28</sup>
Colorado.....	2	17,500	35	65	4	2		100 per month	7	10	12,000
Connecticut.....	4	15,000	36	279	2	2		600 per term	5	8	15,000 <sup>16</sup>
Delaware.....	4	12,000	17	35	4	2		1,077 per annum	3	12	17,000 <sup>27</sup>
Florida.....	4 <sup>6</sup>	15,000	38	95	4	2		10 per diem	7	6	13,500
Georgia.....	4 <sup>6</sup>	12,000 <sup>20</sup>	54	205	2	2		15 per diem	7	6	8,000
Idaho.....	4 <sup>6</sup>	10,000	44	59	2	2		10 per diem	5	6	8,500
Illinois.....	4	25,000	58	177	4	2		10,000 per biennium	7	9	20,000
Indiana.....	4 <sup>6</sup>	15,000	50	100	4	2		1,800 per annum	5	6	15,000
Iowa.....	2	12,000	50	108	4	2		2,000 per session	9	6	10,000
Kansas.....	2	15,000	40	125	4	2		5 per diem	7	6	10,000 <sup>32</sup>
Kentucky.....	4 <sup>6</sup>	15,000	38	190	4	2		25 per diem	7	8	12,000
Louisiana.....	4 <sup>6</sup>	18,000	39	101	4	4		30 per diem	7	14	18,000
Maine.....	2	10,000	33	151	2	2		1,250 per session	6	7	11,000 <sup>39</sup>
Maryland.....	4 <sup>6</sup>	15,000	29	123	4	4		1,800 per annum	5	15	21,000 <sup>15</sup>
Massachusetts.....	2	20,000	40	240	2	2		4,500 per annum	7	Life	22,000 <sup>36</sup>
Michigan.....	2	22,500	34	110	2	2		4,000 per annum	8	8	18,500
Minnesota.....	2	15,000	67	131	4	2		4,800 per session <sup>24</sup>	7	6	15,000 <sup>40</sup>
Mississippi.....	4 <sup>6</sup>	15,000	49	140	4	4		3,000 per annum	9	8	12,500 <sup>47</sup>
Missouri.....	4 <sup>6</sup>	25,000	34	157	4	2		1,500 per annum	7	12	17,500
Montana.....	4	12,500	56	94	4	2		20 per diem	5	6	11,000
Nebraska.....	2	11,000		43 <sup>11</sup>		2 <sup>11</sup>		872 per annum	7	6	12,000
Nevada.....	4	15,000	17	47	4	2		15 per diem	3	6	16,500
New Hampshire.....	2	12,000	24	(14)	2	2		200 per biennium	5	(14)	12,000
New Jersey.....	4 <sup>6</sup>	30,000	21	60	4	2		5,000 per annum	7	(24)	24,000 <sup>12</sup>
New Mexico.....	2 <sup>3</sup>	15,000	32	66	4	2		20 per diem	5	8	15,000
New York.....	4	50,000	58	150	2	2		7,500 per annum	7	14	32,500
North Carolina.....	4 <sup>6</sup>	15,000	50	120	2	2		15 per diem <sup>31</sup>	7	8	16,000
North Dakota.....	2	9,000	49	113	4	2		5 per diem	5	10	10,000
Ohio.....	2	20,000	33	136	2	2		3,200 per annum	7	6	16,000
Oklahoma.....	4 <sup>6</sup>	15,000	44	(14)	4	2		15 per diem <sup>17</sup>	9	6	12,500
Oregon.....	4 <sup>6</sup>	15,000	30	60	4	2		600 per annum	7	6	13,500
Pennsylvania.....	4 <sup>6</sup>	25,000	50	208	4	2		3,000 per session	7	21	25,000 <sup>9</sup>
Rhode Island.....	2	15,000	44	100	2	2		5 per diem <sup>19</sup>	5	(20)	17,000 <sup>18</sup>
South Carolina.....	4 <sup>6</sup>	15,000	46	124	4	2		1,000 per session	5	10	10,000
South Dakota.....	2 <sup>3</sup>	12,000	35	75	2	2		1,050 per biennium	5	6	10,000
Tennessee.....	4 <sup>6</sup>	12,000	33	99	2	2		10 per diem <sup>22</sup>	5	8	12,000 <sup>35</sup>
Texas.....	2	25,000	31	150	4	2		25 per diem <sup>23</sup>	(21)	6	17,500
Utah.....	4	10,000	25	64	4	2		500 per annum <sup>7</sup>	5	10	10,000
Vermont.....	2	11,500	30	246	2	2		70 per week	5	2	10,000 <sup>33</sup>
Virginia.....	4 <sup>6</sup>	17,500	40	100	4	2		1,080 per session	7	12	15,500 <sup>30</sup>
Washington.....	4	15,000	46	99	4	2		1,200 per annum	9	6	12,000
West Virginia.....	4 <sup>6</sup>	17,500	32	100	4	2		1,500 per annum	5	12	17,500
Wisconsin.....	2	18,000	33	100	4	2		200 per month	7	10	14,000 <sup>29</sup>
Wyoming.....	4	12,000	27	56	4	2		12 per diem	3	8	11,000

<sup>1</sup> Known as **General Assembly** in Arkansas, Colorado, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kentucky, Maryland, Missouri, New Jersey, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia; **Legislative Assembly** in Montana, North Dakota, Oregon; **General Court** in Massachusetts, New Hampshire; **Legislature** in other states. Meets annually in Arizona, California, Maryland, Massachusetts, Michigan, New Jersey, New York, Rhode Island, South Carolina; biennially in other states. <sup>2</sup> Known as **Court of Appeals** in Kentucky, Maryland, New York; **Supreme Court of Appeals** in Virginia, West Virginia; **Supreme Judicial Court** in Maine, Massachusetts; **Supreme Court of Errors** in Connecticut; **Supreme Court** in other states. <sup>3</sup> Upper house; known as **Senate** in all states. <sup>4</sup> Lower house; known as **Assembly** in California, Nevada, New York, Wisconsin; **House of Delegates** in Maryland, Virginia, West Virginia; **House of Representatives** in other states. <sup>5</sup> Does not include additional payment for expenses, mileage, etc. <sup>6</sup> Cannot succeed himself. <sup>7</sup> Plus \$5 per diem during sessions. <sup>8</sup> May not serve a third consecutive term. <sup>9</sup> Chief Justice, \$25,500. <sup>10</sup> Chief Justice, \$15,500. <sup>11</sup> Unlcameral legislature. <sup>12</sup> Chief Justice, \$25,000. <sup>13</sup> Varies from 350 to 400. <sup>14</sup> Until 70 years old. <sup>15</sup> Chief Judge, \$22,000. <sup>16</sup> Varies from 119 to 123. <sup>17</sup> During session, to \$1,125; \$100 per month otherwise. <sup>18</sup> Chief Justice, \$18,000. <sup>19</sup> For 60 days only. <sup>20</sup> Term of good behavior. <sup>21</sup> 9 members in Supreme Court (highest in civil cases); 3 members in Court of Criminal Appeals. <sup>22</sup> For 75 days only. <sup>23</sup> For first 120 days only. <sup>24</sup> House Senate \$9,600. <sup>25</sup> Chief Justice, \$21,500. <sup>26</sup> Governor declined raise offered by 1953 Legislature. <sup>27</sup> Chief Justice, \$17,500. <sup>28</sup> For terms beginning after July 8, 1955; \$12,000 for terms beginning earlier. <sup>29</sup> Chief Justice, \$500 extra. <sup>30</sup> Chief Justice, \$12,000. <sup>31</sup> Chief Justice, \$16,000. <sup>32</sup> For 90 only. <sup>33</sup> Chief Justice, \$13,000. <sup>34</sup> Chief Justice, \$10,500. <sup>35</sup> During good behavior; retired at 70. <sup>36</sup> After Sept. 1958: Chief Justice, \$10,500; Associate Justices \$15,000. <sup>37</sup> Chief Justice, \$23,000. <sup>38</sup> Chief Justice, \$13,500.

## Tabulated Data on City Governments

Source: Questionnaires to the cities.

City	MAYOR		City manager's salary <sup>1,2</sup>	COUNCIL OR COMMISSION			
	Term, years	Salary <sup>1</sup>		Name	Members	Term, years	Salary <sup>1</sup>
Akron, Ohio.....	2	\$12,000	.....	Council	13	2	\$3,900
Atlanta, Ga.....	4	20,000	.....	Bd. of Aldermen	17	4	300 <sup>17</sup>
Baltimore, Md.....	4	25,000	.....	Council	21	4	6,500 <sup>26</sup>
Birmingham, Ala.....	4	10,000	.....	Commission	3	4	9,000
Boston, Mass.....	4	20,000	.....	Council	9	2	5,000
Buffalo, N. Y.....	4	20,000	.....	Council	15	2 <sup>4</sup>	6,000 <sup>20</sup>
Chicago, Ill.....	4	25,000	.....	Council	50	4	5,000 <sup>14</sup>
Cincinnati, Ohio.....	2	10,605	\$30,000	Council	9	2	8,000
Cleveland, Ohio.....	2	25,000	.....	Council	33	2	5,000
Columbus, Ohio.....	4	11,500	.....	Council	7	4	1,000
Dallas, Tex.....	2	20 <sup>8</sup>	22,500	Council	9	2	20 <sup>8</sup>
Dayton, Ohio.....	4	1,800	21,000	Commission	5	4	1,200
Denver, Colo.....	4	14,000	.....	Council	9	4	3,000 <sup>10</sup>
Detroit, Mich.....	4	25,000	.....	Council	9	4	12,000
Ft. Worth, Tex.....	2	10 <sup>22</sup>	18,000	Council	9	2	10 <sup>22</sup>
Houston, Tex.....	2	20,000	.....	Council	8	2	300 <sup>7</sup>
Indianapolis, Ind.....	4	13,200	.....	Council	9	4	1,200 <sup>16</sup>
Jacksonville, Fla.....	4	9,600	.....	( <sup>22</sup> )	( <sup>22</sup> )	4	( <sup>22</sup> )
Jersey City, N. J.....	4	12,000	.....	Commission	5	4	11,250
Kansas City, Mo.....	4	15,000	( <sup>26</sup> )	Council	8	4	4,800
Long Beach, Calif.....	3	250 <sup>3</sup>	22,500	Council	9	3	200 <sup>3</sup>
Los Angeles, Calif.....	4	18,000	.....	Council	15	4	7,200
Louisville, Ky.....	4	12,000	.....	Bd. of Aldermen	12	2	2,400
Memphis, Tenn.....	4	15,500	.....	Commission	5	4	7,200 <sup>21</sup>
Miami, Fla.....	2	5,000	25,000	Commission	5	4	5,000
Milwaukee, Wis.....	4	20,000	.....	Council	19	4	7,500
Minneapolis, Minn.....	2	10,750	.....	Council	13	2	5,000
New Orleans, La.....	4	17,500	.....	Council	7	4	7,500
New York, N. Y.....	4	40,000	.....	Council	25	4	7,000
Newark, N. J.....	4	25,000	.....	Council	9	4	6,000 <sup>13</sup>
Norfolk, Va.....	4	1,800	25,000	Council	7	4	1,200
Oakland, Calif.....	4	7,500	25,000	Council	9	4	120 <sup>3</sup>
Oklahoma City, Okla.....	4	1,000	25,000	Council	8	4	10 <sup>6</sup>
Omaha, Nebr.....	3	5,000	.....	Council	7 <sup>12</sup>	3	4,500
Philadelphia, Pa.....	4	25,000	.....	Council	17	4	9,000 <sup>9</sup>
Pittsburgh, Pa.....	4	20,000	.....	Council	9	4	10,000
Portland, Oreg.....	4	11,880	.....	Commission	4	4	10,080
Providence, R. I.....	2	15,000	.....	Council	26	2	1,500 <sup>27</sup>
Richmond, Va.....	2	1,800	22,000	Council	9 <sup>12</sup>	2	1,200
Rochester, N. Y.....	2	3,000	15,000	Council	9	4	2,000
St. Louis, Mo.....	4	10,000	.....	Bd. of Aldermen	29	4	3,000 <sup>11</sup>
St. Paul, Minn.....	2	9,000	.....	Council	7 <sup>12</sup>	2	8,000
San Antonio, Tex.....	2	3,000 <sup>15</sup>	25,000	Council	9	2	1,040
San Diego, Calif.....	4	5,000	25,020	Council	6	4	5,000
San Francisco, Calif.....	4	22,400	.....	Council	11	4	2,400
Seattle, Wash.....	4	12,000	.....	Council	9	4	7,200
Syracuse, N. Y.....	4	15,000	.....	Council	10	2 <sup>18</sup>	2,500 <sup>19</sup>
Toledo, Ohio.....	2	7,000	17,920	Council	9 <sup>24</sup>	2	3,600
Worcester, Mass.....	2	5,000	20,000	Council	9	2	4,000

<sup>1</sup> Annual, unless otherwise indicated. <sup>2</sup> City Manager's term is indefinite and at will of Council. <sup>3</sup> Per month. For 9 District Councilmen; 4 years for 5 Councilmen-at-large. <sup>4</sup> Per Council meeting. <sup>5</sup> For 3 members; 2 years for 2 members. <sup>6</sup> Per month part-time. <sup>7</sup> Per Council meeting; not over \$1,040 per year. <sup>8</sup> President receives \$10,000. <sup>9</sup> President receives \$4,000. <sup>10</sup> President receives \$5,000. <sup>11</sup> Including mayor. <sup>12</sup> President receives \$6,500. <sup>13</sup> Chairman of Finance Committee receives \$3,500 additional. <sup>14</sup> Plus Council pay. <sup>15</sup> President and Chairman of Finance Committee receive \$1,800. <sup>16</sup> Per month; President receives \$350. <sup>17</sup> For 5 District Councilmen; 4 years for 4 Councilmen-at-large and President. <sup>18</sup> President receives \$3,500. <sup>19</sup> President receives \$12,000. <sup>20</sup> Vice-Mayor, who is Commissioner of Fire and Police, has salary of \$8,400. <sup>21</sup> Per week. <sup>22</sup> City has both Council and Commission. Council: members, 9; salary, \$1,500. Commission: members, 5; salary, \$6,000. <sup>23</sup> Including Mayor and Vice-Mayor; latter receives \$4,800. <sup>24</sup> Salary was not indicated on questionnaire. <sup>25</sup> President receives \$12,000. <sup>26</sup> President receives \$2,000.



# UNITED STATES STATISTICS

## POPULATION

### Population of the Continental U. S.

Source: U. S. Bureau of the Census.

Colonial estimates		National censuses				Projections	
Year	Population	Year	Population	Land area, sq. mi.	Pop. per sq. mi.	Year	Population
							NOTE A
1610.....	210	1790.....	3,929,214	867,980	4.5	1960.....	179,358,000
1620.....	2,499	1800.....	5,308,483	867,980	6.1	1965.....	193,346,000
1630.....	5,700	1810.....	7,239,881	1,685,865	4.3	1970.....	209,380,000
1640.....	27,947	1820.....	9,638,453	1,753,588	5.5	1975.....	228,463,000
							NOTE B
1650.....	51,700	1830.....	12,866,020	1,753,588	7.3		
						1960.....	177,840,000
1660.....	84,800	1840.....	17,069,453	1,753,588	9.7	1965.....	190,296,000
1670.....	114,500	1850.....	23,191,876	2,944,337	7.9	1970.....	204,620,000
1680.....	155,600	1860.....	31,443,321	2,973,965	10.6	1975.....	221,522,000
1690.....	213,500	1870.....	39,818,449	2,973,965	13.4		
							NOTE C
1700.....	275,000	1880.....	50,155,783	2,973,965	16.9		
						1960.....	177,840,000
1710.....	357,500	1890.....	62,947,714	2,973,965	21.2	1965.....	190,296,000
1720.....	474,388	1900.....	75,994,575	2,974,159	25.6	1970.....	202,984,000
1730.....	654,950	1910.....	91,972,266	2,973,890	30.9	1975.....	214,580,000
1740.....	889,000	1920.....	105,710,620	2,973,776	35.5		
							NOTE D
1750.....	1,207,000	1930.....	122,775,046	2,977,128	41.2		
						1960.....	176,452,000
1760.....	1,610,000	1940.....	131,669,275	2,977,128	44.2	1965.....	186,291,000
1770.....	2,205,000	1950.....	151,132,000†	2,974,726	50.8	1970.....	196,370,000
1780.....	2,781,000	1956*.....	167,440,000†	2,974,726	56.3	1975.....	206,907,000

\* Estimate. † Includes armed forces overseas. NOTE A: Projections assuming birth rates of 1954-55 remain constant. NOTE B: Projections assuming birth rates of 1950-53 remain constant. NOTE C: Projections assuming birth rates of 1950-53 remain constant to 1965 and then decline. NOTE D: Projections assuming birth rates of 1950-53 decline rapidly to roughly the prewar level by 1975.

### Estimates of World Population by Regions, 1650-1950

Source: W. F. Willcox, 1650-1900; United Nations, 1920-1950.

Date	Estimated population in millions						
	Africa	North America*	Latin America†	Asia (exc. U.S.S.R.)‡	Europe and Asiatic U.S.S.R.‡	Oceania	World total
1650.....	100	1	7	257	103	2	470
1750.....	100	1	10	437	144	2	694
1800.....	100	6	23	505	193	2	919
1850.....	100	26	33	656	274	2	1,091
1900.....	141	81	63	857	423	6	1,571
1920.....	136	115	92	997	485	9	1,834
1930.....	155	134	110	1,069	530	10	2,008
1940.....	177	144	132	1,173	579	11	2,216
1950.....	199	166	162	1,272	594	13	2,406

\* United States, Canada, Alaska, St. Pierre and Miquelon. † Mexico, Central and South America and Caribbean Islands. ‡ Estimates for Asia and Europe by Willcox have been adjusted so as to include the population of Asiatic U.S.S.R. with that of Europe rather than Asia.

## Distribution of U. S. Population According to Size of Place, 1790 to 1950

*Source: U. S. Bureau of the Census.*

Census year	Total population	Population distribution (Total for year = 100%)					Number of urban places of specified size		
		Total urban	Urban places of			Total rural	1,000,000 or more	100,000 to 1,000,000	Under 100,000
			1,000,000 or more	100,000 to 1,000,000	Under 100,000				
1790.....	3,929,214	5.1	—	—	5.1	94.9	—	—	24
1800.....	5,308,483	6.1	—	—	6.1	93.9	—	—	33
1810.....	7,239,881	7.3	—	—	7.3	92.7	—	—	46
1820.....	9,638,453	7.2	—	1.3	5.9	92.8	—	1	60
1830.....	12,866,020	8.8	—	1.6	7.2	91.2	—	1	89
1840.....	17,069,453	10.8	—	3.0	7.8	89.2	—	3	128
1850.....	23,191,876	15.3	—	5.1	10.2	84.7	—	6	230
1860.....	31,443,321	19.8	—	8.4	11.4	80.2	—	9	383
1870.....	38,558,371	25.7	—	10.7	15.0	74.3	—	14	649
1880.....	50,155,783	28.2	2.4	10.0	15.8	71.8	1	19	919
1890.....	62,947,714	35.1	5.8	9.6	19.7	64.9	3	25	1,320
1900.....	75,994,575	39.7	8.5	10.2	21.0	60.3	3	35	1,699
1910.....	91,972,266	45.7	9.2	12.9	23.6	54.3	3	47	2,212
1920.....	105,710,620	51.2	9.6	16.3	25.3	48.8	3	65	2,654
1930.....	122,775,046	56.2	12.3	17.3	26.6	43.8	5	88	3,072
1940.....	131,669,275	56.5	12.1	16.8	27.6	43.5	5	87	3,372
1950*.....	150,697,361	59.0	11.5	18.0	29.5	41.0	5	102	3,916
1950†.....	150,697,361	64.0	11.5	17.9	34.6	36.0	5	101	4,635

\* Old urban definition. † New urban definition.

## White and Negro Population by State, 1950 Census

*Source: U. S. Bureau of the Census.*

State	White	Negro	Other	State	White	Negro	Other
Alabama.....	2,079,591	979,617	2,535	Nebraska.....	1,301,328	19,234	4,948
Arizona.....	654,511	25,974	69,102	Nevada.....	149,908	4,302	5,873
Arkansas.....	1,481,507	426,639	1,365	New Hampshire..	532,275	731	236
California.....	9,915,173	462,172	208,878	New Jersey.....	4,511,585	318,565	5,179
Colorado.....	1,296,653	20,177	8,259	New Mexico.....	630,211	8,408	42,568
Connecticut.....	1,952,329	53,472	1,479	New York.....	13,872,095	918,191	39,906
Delaware.....	273,878	43,598	609	North Carolina...	2,983,121	1,047,353	31,455
D. C.....	517,865	280,803	3,510	North Dakota.....	608,448	257	10,931
Florida.....	2,166,051	603,101	2,153	Ohio.....	7,428,222	513,072	5,333
Georgia.....	2,380,577	1,062,762	1,239	Oklahoma.....	2,032,526	145,503	55,322
Idaho.....	581,395	1,050	6,192	Oregon.....	1,497,128	11,529	12,684
Illinois.....	8,046,058	645,980	20,138	Pennsylvania.....	9,853,848	638,485	5,679
Indiana.....	3,758,512	174,168	1,544	Rhode Island.....	777,015	13,903	978
Iowa.....	2,599,546	19,692	1,835	South Carolina...	1,293,405	822,077	1,545
Kansas.....	1,828,961	73,158	3,180	South Dakota.....	628,504	727	23,509
Kentucky.....	2,742,090	201,921	795	Tennessee.....	2,760,257	530,603	858
Louisiana.....	1,796,683	882,428	4,405	Texas.....	6,726,534	977,458	7,202
Maine.....	910,846	1,221	1,707	Utah.....	676,909	2,729	9,224
Maryland.....	1,954,975	385,972	2,054	Vermont.....	377,188	443	116
Massachusetts.....	4,611,503	73,171	5,840	Virginia.....	2,581,555	734,211	2,914
Michigan.....	5,917,825	442,296	11,645	Washington.....	2,316,496	30,691	31,776
Minnesota.....	2,953,697	14,022	14,764	West Virginia.....	1,890,282	114,867	403
Mississippi.....	1,188,632	986,494	3,788	Wisconsin.....	3,392,690	28,182	13,703
Missouri.....	3,655,593	297,088	1,972	Wyoming.....	284,009	2,557	3,963
Montana.....	572,038	1,232	17,754	TOTAL U. S.....	134,942,028	15,042,286	713,047

## Distribution of U. S. Population by Race, 1850-1950

Source: U. S. Bureau of the Census.

Year	White	Nonwhite					Total Nonwhite
		Negro	Indian	Japanese	Chinese	All other	
1850	19,553,068	3,638,808	.....	.....	.....	.....	3,638,808
1860	26,922,537	4,441,830	44,021	.....	34,933	.....	4,520,784
1870	33,589,377	4,880,009	25,731	55	63,199	.....	4,968,994
1880	43,402,970	6,580,793	66,407	148	105,465	.....	6,752,813
1890	55,101,258	7,488,676	248,253	2,039	107,488	.....	7,846,456
1900	66,809,196	8,833,994	237,196	24,326	89,863	.....	9,185,379
1910	81,731,957	9,827,763	265,683	72,157	71,531	3,175	10,240,309
1920	94,820,915	10,463,131	244,437	111,010	61,639	9,488	10,889,705
1930	110,286,740	11,891,143	332,397	138,834	74,954	50,978	12,488,306
1940	118,214,870	12,865,518	333,969	126,947	77,504	50,467	13,454,405
1950	134,942,028	15,042,286	343,410	141,768	117,629	110,240	15,755,333
Urban	86,756,435	9,392,608	56,108	100,735	109,434	52,366	9,711,251
Rural nonfarm	28,470,339	2,491,377	178,678	14,260	5,844	20,827	2,710,986
Rural farm	19,715,254	3,158,301	108,624	26,773	2,351	37,047	3,333,096

## United States Population Distribution by Age, Race, Nativity and Sex, 1850-1950

Source: Mortimer Spiegelman, *Introduction to Demography*.

Year	Total	Age					Race and Nativity				
		Under 5	5-19	20-44	45-64	65 and over	White			Nonwhite	
							Total	Native born	Foreign born		
Per cent distribution											
1850*	100.0	15.1	37.4	35.1	9.8	2.6	84.3	74.6	9.7	15.7	
1860†	100.0	15.4	35.8	35.7	10.4	2.7	85.6	72.6	13.0	14.4	
1870†	100.0	14.3	35.4	35.4	11.9	3.0	87.1	72.9	14.2	12.9	
1880†	100.0	13.8	34.3	35.9	12.6	3.4	86.5	73.4	13.1	13.5	
1890†	100.0	12.2	33.9	36.9	13.1	3.9	87.5	73.0	14.5	12.5	
1900.....	100.0	12.1	32.3	37.8	13.7	4.1	87.9	74.5	13.4	12.1	
1910.....	100.0	11.6	30.4	39.1	14.6	4.3	88.9	74.4	14.5	11.1	
1920.....	100.0	11.0	29.8	38.4	16.1	4.7	89.7	76.7	13.0	10.3	
1930.....	100.0	9.3	29.5	38.3	17.5	5.4	89.8	78.4	11.4	10.2	
1940.....	100.0	8.0	26.4	38.9	19.8	6.9	89.8	81.1	8.7	10.2	
1950§	100.0	10.7	23.2	37.7	20.3	8.1	89.5	82.8	6.7	10.5	
Males per 100 females											
1850*	104.3	102.4	100.9	108.1	106.4	101.3	105.2	103.1	123.8	99.1	
1860†	104.7	102.4	101.2	107.9	111.5	98.3	105.3	103.7	115.1	101.2	
1870†	102.2	102.9	101.2	99.2	114.5	100.5	102.8	100.6	115.3	98.4	
1880†	103.6	103.0	101.3	104.0	110.2	101.4	104.0	102.1	115.9	100.7	
1890†	105.0	103.6	101.4	107.3	108.3	104.2	105.4	102.9	118.7	102.2	
1900.....	104.4	102.1	100.9	105.8	110.7	102.0	104.9	102.8	117.4	101.0	
1910.....	106.0	102.5	101.3	108.1	114.4	101.1	106.6	102.7	129.2	101.3	
1920.....	104.0	102.5	100.8	102.8	115.2	101.3	104.4	101.7	121.7	100.9	
1930.....	102.5	103.0	101.4	100.5	109.1	100.5	102.9	101.1	115.8	99.1	
1940.....	100.7	103.2	102.0	98.1	105.2	95.5	101.2	100.1	111.1	96.7	
1950§	99.0	103.9	102.9	97.0	100.2	89.6	99.4	99.0	103.9	96.2	

\* Excludes nonwhite races other than Negro. † Excludes Indians in Indian Territory and on Indian reservations. ‡ The age figures exclude all persons residing on Indian reservations, whether white or nonwhite; these persons are included in the race and nativity distributions. § Includes armed forces overseas and other persons abroad. NOTE: For 1850 and 1860, the data in the census reports at ages 40-49 and 60-69 are published in 10-year age groupings; these were subdivided into 5-year age groupings by the author.



# U. S. Population by Age, Sex and Race, July 1, 1955

Source: U. S. Bureau of the Census.

Age	White		Nonwhite		Total	
	Male	Female	Male	Female	Male	Female
Under 5 years.....	8,097,000	7,759,000	1,225,000	1,223,000	9,323,000	8,982,000
Under 1 year.....	1,604,000	1,536,000	236,000	239,000	1,840,000	1,775,000
1 and 2 years.....	3,270,000	3,133,000	497,000	493,000	3,767,000	3,626,000
3 and 4 years.....	3,224,000	3,091,000	492,000	490,000	3,716,000	3,581,000
5 to 9 years.....	7,657,000	7,231,000	1,107,000	1,094,000	8,764,000	8,384,000
10 to 14 years.....	5,981,000	5,746,000	804,000	809,000	6,785,000	6,555,000
15 to 19 years.....	4,969,000	4,795,000	712,000	708,000	5,682,000	5,504,000
20 to 24 years.....	4,771,000	4,705,000	629,000	662,000	5,399,000	5,367,000
25 to 29 years.....	5,196,000	5,239,000	611,000	698,000	5,807,000	5,937,000
30 to 34 years.....	5,452,000	5,631,000	619,000	690,000	6,071,000	6,321,000
35 to 39 years.....	5,151,000	5,309,000	535,000	605,000	5,686,000	5,914,000
40 to 44 years.....	4,954,000	5,105,000	542,000	608,000	5,496,000	5,713,000
45 to 49 years.....	4,515,000	4,606,000	473,000	497,000	4,988,000	5,103,000
50 to 54 years.....	3,937,000	4,035,000	410,000	425,000	4,348,000	4,461,000
55 to 59 years.....	3,508,000	3,670,000	329,000	332,000	3,837,000	4,002,000
60 to 64 years.....	3,010,000	3,180,000	247,000	253,000	3,257,000	3,433,000
65 to 69 years.....	2,407,000	2,583,000	181,000	183,000	2,587,000	2,766,000
70 to 74 years.....	2,167,000	2,047,000	129,000	136,000	2,296,000	2,183,000
75 to 79 years.....	1,071,000	1,309,000	84,000	90,000	1,154,000	1,399,000
80 to 84 years.....	545,000	704,000	41,000	44,000	586,000	748,000
85 years and over.....	303,000	430,000	33,000	42,000	336,000	472,000
All ages.....	73,291,000	74,145,000	8,710,000	9,100,000	82,001,000	83,245,000
5 to 17 years.....	16,682,000	15,965,000	2,350,000	2,338,000	19,031,000	18,303,000
14 years and over.....	52,621,000	54,376,000	5,722,000	6,126,000	58,344,000	60,502,000
18 years and over.....	48,512,000	50,421,000	5,135,000	5,539,000	53,647,000	55,961,000
21 years and over.....	45,630,000	47,619,000	4,731,000	5,132,000	50,361,000	52,750,000
65 years and over.....	6,092,000	7,073,000	467,000	496,000	6,559,000	7,569,000
Median age, years.....	30.0	31.4	24.0	25.4	29.3	30.7

NOTE: Data relate to the total population of the continental United States, including the armed forces overseas.

## Immigrants and Emigrants; United States, 1911-1955

Source: U. S. Immigration and Naturalization Service and U. S. Bureau of the Census.

Period*	Immigrants	Emigrants	Excess of immigrants over emigrants	Period*	Immigrants	Emigrants	Excess of immigrants over emigrants
1911-15.....	4,459,831	1,444,530	3,015,301	1936-40.....	308,222	135,875	172,347
1916-20.....	1,275,980	702,464	573,516	1941-45.....	170,952	42,696	128,256
1921-25.....	2,638,913	697,397	1,941,516	1946-50.....	864,087	113,703	750,384
1926-30.....	1,468,296	347,679	1,120,617	1951-55.....	1,087,638	134,220	953,418
1931-35.....	220,209	323,863	-103,654				

\* Fiscal years ending June 30.

## Persons Naturalized Since 1907

Source: U. S. Immigration and Naturalization Service.

Period	Civilian	Military	Total	Period	Civilian	Military	Total
1907-10.....	111,738	.....	111,738	1952.....	87,070	1,585	88,655
1911-20.....	884,672	244,300	1,128,972	1953.....	90,476	1,575	92,051
1921-30.....	1,716,979	56,206	1,773,185	1954.....	104,086	13,745	117,831
1931-40.....	1,498,573	19,891	1,518,464	1955.....	197,568	11,558	209,526
1941-50.....	1,837,229	149,799	1,987,028	1907-55.....	6,582,132	500,034	7,082,166
1951.....	53,741	975	54,716				

# Immigration by Country of Origin, 1820 to 1955

Source: Immigration and Naturalization Service.

(Figures are totals, not annual averages, and were tabulated as follows: 1820-67, alien passengers arriving; 1868-91 and 1895-97, immigrant aliens arrived; 1892-94 and 1898 to present, immigrant aliens admitted; Data before 1906 relate to country whence alien came; since 1906, to country of last permanent residence)

Countries	1820-1910	1911-1920	1921-1930	1931-1940	1941-1950	1951-1955	1820-1955
Europe: Albania <sup>1</sup> .....			1,663	2,040	85	14	3,801
Austria <sup>2</sup> .....	3,172,461	453,649	32,868	3,563	24,860	40,521	3,727,922
Belgium.....	103,796	33,746	15,846	4,817	12,189	10,444	180,838
Bulgaria <sup>3</sup> .....	39,440	22,533	2,945	938	375	12	66,241
Czechoslovakia <sup>1</sup> .....		3,426	102,194	14,393	8,347	278	128,633
Denmark.....	258,053	41,983	32,430	2,559	5,393	5,251	345,668
Estonia <sup>1</sup> .....			1,576	506	212	60	2,350
Finland <sup>1</sup> .....		756	16,691	2,146	2,503	2,403	24,491
France.....	470,868	61,897	49,610	12,623	38,809	21,978	655,788
Germany <sup>2</sup> .....	5,351,746	143,945	412,202	114,058	226,578	282,014	6,530,543
Great Britain: England.....	2,212,071	249,944	157,420	21,756	112,252	69,701	2,823,144
Scotland.....	488,749	78,357	159,781	6,887	16,131	15,199	765,104
Wales.....	59,540	13,107	13,012	735	3,209	1,247	90,850
Not specified <sup>4</sup> .....	793,741					2,755	796,496
Greece.....	186,204	184,201	51,084	9,119	8,973	20,087	459,668
Hungary <sup>2</sup> .....		442,693	30,680	7,861	3,469	334	485,037
Ireland.....	4,212,169	146,181	220,591	13,167	25,377	20,851	4,639,928
Italy.....	3,086,356	1,109,524	455,315	68,028	57,661	72,149	4,849,033
Latvia <sup>1</sup> .....			3,399	1,192	361	103	5,055
Lithuania <sup>1</sup> .....			6,015	2,201	683	59	8,958
Luxemburg <sup>1</sup> .....			727	565	820	338	2,450
Netherlands.....	175,943	43,718	26,948	7,150	14,860	16,245	284,864
Norway <sup>5</sup> .....	665,189	66,395	68,531	4,740	10,100	11,315	826,270
Poland <sup>6</sup> .....	165,182	4,813	227,734	17,026	7,571	665	422,991
Portugal.....	132,989	89,732	29,994	3,329	7,423	5,856	269,323
Rumania <sup>7</sup> .....	72,117	13,311	67,646	3,871	1,076	193	158,214
Spain.....	69,296	68,611	28,958	3,258	2,898	3,081	176,102
Sweden <sup>8</sup> .....	1,021,165	95,074	97,249	3,960	10,665	9,845	1,237,958
Switzerland.....	237,401	23,091	29,676	5,512	10,547	8,149	314,376
Turkey in Europe.....	85,800	54,677	14,659	737	580	479	156,932
U.S.S.R. <sup>9</sup> .....	2,359,048	921,201	61,742	1,356	548	85	3,343,980
Yugoslavia <sup>3</sup> .....		1,888	49,064	5,835	1,576	2,652	61,015
Other Europe.....	2,605	8,111	9,603	2,361	5,573	3,872	30,535
Total Europe.....	25,421,929	4,376,564	2,477,853	348,289	621,704	628,235	33,874,574
Asia: China.....	326,060	21,278	29,907	4,928	16,709	1,948	400,830
India.....	5,409	2,082	1,886	496	1,761	674	12,308
Japan <sup>10</sup> .....	158,344	83,837	33,462	1,948	1,555	14,660	293,806
Turkey in Asia <sup>10</sup> .....	106,481	79,389	19,165	328	218	115	205,696
Other Asia.....	16,942	5,973	12,980	7,644	11,537	24,988	80,064
Total Asia <sup>10</sup> .....	613,236	192,559	97,400	15,344	31,780	42,385	992,704
America: Canada & Newfoundland <sup>11</sup> .....	1,230,501	742,185	924,515	108,527	171,718	162,825	3,340,271
Central America.....	10,365	17,159	15,769	5,861	21,665	14,631	85,450
Mexico <sup>12</sup> .....	77,645	219,004	459,287	22,319	60,589	106,762	945,606
South America.....	29,385	41,899	42,215	7,803	21,831	27,927	171,060
West Indies.....	233,146	123,424	74,899	15,502	49,725	42,489	539,185
Other America <sup>13</sup> .....			31	25	29,276	37,719	67,051
Total America.....	1,581,042	1,143,671	1,516,716	160,037	354,804	392,353	5,148,623
Africa.....	9,581	8,443	6,286	1,750	7,367	5,216	38,643
Australia & New Zealand.....	31,654	12,348	8,299	2,231	13,805	3,554	71,891
Pacific Islands <sup>14</sup> .....	8,859	1,079	427	780	5,437	3,499	20,081
Countries not specified.....	252,691 <sup>14</sup>	1,147	228		142	12,396	266,604
Total all countries.....	27,918,992	5,735,811	4,107,209	528,431	1,035,039	1,087,638	40,413,120

<sup>1</sup> Countries established since beginning of World War I are theretofore included with countries to which they belong. <sup>2</sup> Data for Austria-Hungary not reported until 1861. Austria and Hungary recorded separately after 1905. <sup>3</sup> Bulgaria, Serbia, Montenegro first reported in 1899. Bulgaria reported separately since 1920. In 1920, separate enumeration for Kingdom of Serbs, Croats, Slovenes; since 1922, recorded as Yugoslavia. <sup>4</sup> United Kingdom not specified; for 1901-51, included in "Other Europe." <sup>5</sup> Norway included with Sweden 1820-68. <sup>6</sup> Included with Austria-Hungary, Germany and Russia 1899-1919. <sup>7</sup> No record of immigration until 1880. <sup>8</sup> Since 1931, U.S.S.R. has been broken down into European Russia and Siberia or Asiatic Russia. <sup>9</sup> No record of immigration until 1861. <sup>10</sup> No record of immigration until 1869. <sup>11</sup> Includes all British North America possessions 1820-98. <sup>12</sup> No record of immigration 1886-93. <sup>13</sup> Included with "Countries not specified" prior to 1925. <sup>14</sup> Includes 32,897 persons returning in 1906 to their homes in U.S. <sup>15</sup> From 1952, Asia included Philippines. From 1934-51, Philippines included in Pacific Islands; before 1934, recorded in separate tables as insular travel.

# United States Population by State, 1790 to 1955

Source: U. S. Bureau of the Census.

States	Population			1950			July 1, 1955	
	1790	1850	1900	Population	Land area, sq. mi.	Pop. per sq. mi.	Population	Rank
Alabama.....		771,623	1,828,697	3,061,743	51,078	59.9	3,033,000	19
Arizona.....			122,931	749,587	113,575	6.6	980,000	35
Arkansas.....		209,897	1,311,564	1,909,511	52,675	36.6	1,789,000	31
California.....		92,597	1,485,053	10,586,223	156,740	67.5	13,032,000	2
Colorado.....			539,700	1,325,089	103,922	12.8	1,549,000	33
Connecticut.....	237,946	370,792	908,420	2,007,280	4,899	409.7	2,241,000	26
Delaware.....	59,096	91,532	184,735	318,085	1,978	160.8	387,000	46
D. C.....		51,687	278,718	802,178	61	13,150.5	853,000	37
Florida.....		87,445	528,542	2,771,305	54,262	51.1	3,452,000	16
Georgia.....	82,548	906,185	2,216,331	3,444,578	58,483	58.9	3,621,000	14
Idaho.....			161,772	588,637	82,769	7.1	609,000	44
Illinois.....		851,470	4,821,550	8,712,176	55,935	155.8	9,361,000	4
Indiana.....		988,416	2,516,462	3,934,224	36,205	108.7	4,330,000	10
Iowa.....		192,214	2,231,853	2,621,073	56,045	46.8	2,692,000	22
Kansas.....			1,470,495	1,905,299	82,108	23.2	2,060,000	29
Kentucky.....	73,677	982,405	2,147,174	2,944,806	39,864	73.9	3,005,000	20
Louisiana.....		517,762	1,381,625	2,683,516	45,162	59.4	2,927,000	21
Maine.....	96,540	583,169	694,466	913,774	31,040	29.4	905,000	36
Maryland.....	319,728	583,034	1,188,044	2,343,001	9,881	237.1	2,669,000	23
Massachusetts.....	378,787	994,514	2,805,346	4,690,514	7,867	596.2	5,016,000	9
Michigan.....		397,654	2,420,982	6,371,766	57,022	111.7	7,236,000	7
Minnesota.....		6,077	1,751,394	2,982,483	80,009	37.3	3,174,000	18
Mississippi.....		606,526	1,551,270	2,178,914	47,248	46.1	2,111,000	28
Missouri.....		682,044	3,106,665	3,954,653	69,226	57.1	4,128,000	12
Montana.....			243,329	591,024	145,878	4.1	633,000	43
Nebraska.....			1,066,300	1,325,510	76,663	17.3	1,381,000	34
Nevada.....			42,335	160,083	109,789	1.5	225,000	49
New Hampshire.....	141,885	317,976	411,588	533,242	9,017	59.1	557,000	45
New Jersey.....	184,139	489,555	1,883,669	4,835,329	7,522	642.8	5,420,000	8
New Mexico.....		61,547	195,310	681,187	121,511	5.6	795,000	39
New York.....	340,120	3,097,394	7,268,894	14,830,192	47,944	309.3	16,124,000	1
North Carolina.....	393,751	869,039	1,893,810	4,061,929	49,097	82.7	4,285,000	11
North Dakota.....			319,146	619,636	70,057	8.8	642,000	42
Ohio.....		1,980,329	4,157,545	7,946,627	41,000	193.8	8,966,000	5
Oklahoma.....			790,391*	2,233,351	69,031	32.4	2,168,000	27
Oregon.....		13,294	413,536	1,521,341	96,315	15.8	1,669,000	32
Pennsylvania.....	434,373	2,311,786	6,302,115	10,498,012	45,045	233.1	11,159,000	3
Rhode Island.....	68,825	147,545	428,556	791,896	1,058	748.5	845,000	38
South Carolina.....	249,073	668,507	1,340,316	2,117,027	30,305	69.9	2,283,000	25
South Dakota.....			401,570	652,740	76,536	8.5	677,000	41
Tennessee.....	35,691	1,002,717	2,020,616	3,291,718	41,797	78.8	3,417,000	17
Texas.....		212,592	3,048,710	7,711,194	263,513	29.3	8,563,000	6
Utah.....		11,380	276,749	688,862	82,346	8.4	781,000	40
Vermont.....	85,425	314,120	343,641	377,747	9,278	40.7	378,000	47
Virginia.....	747,610	1,421,661	1,854,184	3,318,680	39,893	83.2	3,579,000	15
Washington.....			518,103	2,378,963	66,786	35.6	2,570,000	24
West Virginia.....			958,800	2,005,552	24,080	83.3	2,002,000	30
Wisconsin.....		305,391	2,069,042	3,434,575	54,705	62.8	3,694,000	13
Wyoming.....			92,531	290,529	97,506	3.0	306,000	48

\* Includes population of Indian Territory: 1900, 392,060.



# Population and Area of Major U. S. Cities, Census Years, 1920-1950

(Over 50,000 population in 1950)

Source: U. S. Bureau of the Census.

City	1920 population	1930 population	1940 population	1950 population	% increase, 1940-50	1950 rank	Area sq. mi.*
Akron, Ohio	208,435	255,040	244,791	274,605	12.2	39	53.7
Alameda, Calif.	28,806	35,033	36,256	64,430	77.7	184	10.7
Albany, N. Y.	113,344	127,412	130,577	134,995	3.4	68	19.0
Albuquerque, N. Mex.	15,157	26,570	35,449	96,815	173.1	112	47.9
Alexandria, Va.	18,060	24,149	33,523	61,787	84.3	192	7.5
Alhambra, Calif.	9,096	29,472	38,935	51,359	31.9	224	7.0
Allentown, Pa.	73,502	92,563	96,904	106,756	10.2	99	15.9
Altoona, Pa.	60,331	82,054	80,214	77,177	-3.8	150	10.0
Amarillo, Tex.	15,494	43,132	51,686	74,246	43.6	155	20.9
Asheville, N. C.	28,504	50,193	51,310	53,000	3.3	215	14.5
Atlanta, Ga.	200,616	270,366	302,288	331,314	9.6	33	36.9
Atlantic City, N. J.	50,707	66,198	64,094	61,657	-3.8	193	11.5
Augusta, Ga.	52,548	60,342	65,919	71,508	8.5	165	9.8
Aurora, Ill.	36,397	46,589	47,170	50,576	7.2	230	8.1
Austin, Tex.	34,876	53,120	87,930	132,459	50.6	72	32.1
Baltimore, Md.	733,826	804,874	859,100	949,708	10.5	6	78.7
Baton Rouge, La.	21,782	30,729	34,719	125,629	261.8	81	30.2
Bay City, Mich.	47,554	47,355	47,956	52,523	9.5	218	9.6
Bayonne, N. J.	76,754	88,979	79,198	77,203	-2.5	149	5.2
Beaumont, Tex.	40,422	57,732	59,061	94,014	59.2	118	31.4
Berkeley, Calif.	56,036	82,109	85,547	113,805	33.0	90	9.5
Berwyn, Ill.	14,150	47,027	48,451	51,280	5.8	225	3.8
Bethlehem, Pa.	50,358	57,892	58,490	66,340	13.4	176	18.6
Binghamton, N. Y.	66,800	76,662	78,309	80,674	3.0	139	10.1
Birmingham, Ala.	178,806	259,678	267,583	326,037	21.8	34	65.3
Boston, Mass.	748,060	781,188	770,816	801,444	4.0	10	47.8
Bridgeport, Conn.	143,555	146,716	147,121	158,709	7.9	63	14.6
Brockton, Mass.	66,254	63,797	62,343	62,860	0.8	191	21.4
Buffalo, N. Y.	506,775	573,076	575,901	580,132	0.7	15	39.4
Burbank, Calif.	2,913	16,662	34,337	78,577	128.8	146	16.8
Cambridge, Mass.	109,694	113,643	110,879	120,740	8.9	86	6.2
Camden, N. J.	116,309	118,700	117,536	124,555	6.0	85	8.6
Canton, Ohio	87,091	104,906	108,401	116,912	7.9	88	14.1
Cedar Rapids, Iowa	45,566	56,097	62,120	72,296	16.4	161	25.4
Charleston, S. C.	67,957	62,265	71,275	70,174	-1.5	170	5.1
Charleston, W. Va.	39,608	60,408	67,914	73,501	8.2	159	9.6
Charlotte, N. C.	46,338	82,675	100,899	134,042	32.8	69	30.0
Chattanooga, Tenn.	57,895	119,798	128,163	131,041	2.2	73	28.0
Chester, Pa.	58,030	59,164	59,285	66,039	11.4	179	4.7
Chicago, Ill.	2,701,705	3,376,438	3,396,808	3,620,962	6.6	2	207.5
Cicero, Ill.	44,995	66,602	64,712	67,544	4.4	173	5.8
Cincinnati, Ohio	401,247	451,160	455,610	503,998	10.6	18	75.1
Cleveland, Ohio	796,841	900,429	878,336	914,808	4.2	7	75.0
Cleveland Heights, Ohio	15,236	50,945	54,992	59,141	7.5	198	8.2
Clifton, N. J.	26,470	46,875	48,827	64,511	32.1	182	11.7
Columbia, S. C.	37,524	51,581	62,396	86,914	39.3	129	12.8
Columbus, Ga.	31,125	43,131	53,280	79,611	49.4	142	12.0
Columbus, Ohio	237,031	290,564	306,087	375,901	22.8	28	39.4
Corpus Christi, Tex.	10,522	27,741	57,301	108,287	89.0	97	21.5
Covington, Ky.	57,121	65,252	62,018	64,452	3.9	183	6.4
Cranston, R. I.	29,407	42,911	47,085	55,060	16.9	210	28.7
Dallas, Tex.	158,976	260,475	294,734	434,462	47.4	22	112.0
Davenport, Iowa	56,727	60,751	66,039	74,549	12.9	152	18.1
Dayton, Ohio	152,559	200,982	210,718	243,872	15.7	44	25.0
Dearborn, Mich.	2,470	50,358	63,584	94,994	49.4	117	25.3
Decatur, Ill.	43,818	57,510	59,305	66,269	11.7	177	9.3
Denver, Colo.	256,491	287,861	322,412	415,786	29.0	24	66.8
Des Moines, Iowa	126,468	142,559	159,819	177,965	11.4	53	54.9
Detroit, Mich.	993,678	1,568,662	1,623,452	1,849,568	13.9	5	139.6
Duluth, Minn.	98,917	101,463	101,065	104,511	3.4	102	62.3
Durham, N. C.	21,719	52,037	60,195	71,311	18.5	166	13.2
East Chicago, Ind.	35,967	54,784	54,637	54,263	-0.7	213	10.4

City	1920 population	1930 population	1940 population	1950 population	% increase, 1940-50	1950 rank	Area, sq. mi.*
East Orange, N. J.	50,710	68,020	68,945	79,340	15.1	143	3.9
East St. Louis, Ill.	66,767	74,347	75,609	82,295	8.8	135	13.4
El Paso, Tex.	77,560	102,421	96,810	130,485	34.8	75	25.6
Elizabeth, N. J.	95,783	114,589	109,912	112,817	2.6	91	11.7
Erie, Pa.	93,372	115,967	116,955	130,803	11.8	74	18.8
Evanston, Ill.	37,234	63,338	65,389	73,641	12.6	158	8.2
Evansville, Ind.	85,264	102,249	97,062	128,636	32.5	78	18.0
Fall River, Mass.	120,485	115,274	115,428	111,963	-3.0	92	33.9
Flint, Mich.	91,599	156,492	151,543	163,143	7.7	60	29.3
Fort Wayne, Ind.	86,549	114,946	118,410	133,607	12.8	71	18.8
Fort Worth, Tex.	106,482	163,447	177,662	278,778	56.9	38	93.7
Fresno, Calif.	45,086	52,513	60,685	91,669	51.1	124	15.0
Gadsden, Ala.	14,737	24,042	36,975	55,725	50.7	207	27.2
Galveston, Tex.	44,255	52,938	60,862	66,568	9.4	175	8.1
Gary, Ind.	55,378	100,426	111,719	133,911	19.9	70	41.6
Glendale, Calif.	13,536	62,736	82,582	95,702	15.9	115	20.3
Grand Rapids, Mich.	137,634	168,592	164,292	176,515	7.4	55	23.4
Green Bay, Wis.	31,017	37,415	46,235	52,735	14.1	216	13.9
Greensboro, N. C.	19,861	53,569	59,319	74,389	25.6	153	18.2
Greenville, S. C.	23,127	29,154	34,734	58,161	67.4	201	16.2
Hamilton, Ohio	39,675	52,176	50,592	57,951	14.5	202	7.6
Hammond, Ind.	36,004	64,560	70,184	87,594	24.8	128	23.5
Harrisburg, Pa.	75,917	80,339	83,893	89,544	6.7	126	6.3
Hartford, Conn.	138,036	164,072	166,267	177,397	6.7	54	17.4
Hoboken, N. J.	68,166	95,261	50,115	50,676	1.1	229	1.0
Holyoke, Mass.	60,203	56,537	53,750	54,661	1.7	211	21.0
Houston, Tex.	138,276	292,352	384,514	596,163	55.0	14	160.0
Huntington, W. Va.	50,177	75,572	78,836	86,353	9.5	130	14.0
Indianapolis, Ind.	314,194	364,161	386,972	427,173	10.4	23	55.2
Irvington, N. J.	25,480	56,733	55,328	59,201	7.0	197	3.1
Jackson, Mich.	48,374	55,187	49,656	51,088	2.9	228	10.2
Jackson, Miss.	22,817	48,282	62,107	98,271	58.2	110	27.0
Jacksonville, Fla.	91,558	129,549	173,065	204,517	18.2	49	30.2
Jersey City, N. J.	298,103	316,715	301,173	299,017	-0.7	37	13.0
Johnstown, Pa.	67,327	66,993	66,668	63,232	-2.8	189	5.6
Joliet, Ill.	38,442	42,993	42,365	51,601	21.2	222	7.7
Kalamazoo, Mich.	48,487	54,786	54,097	57,704	6.7	203	8.8
Kansas City, Kans.	101,177	121,857	121,458	129,553	6.7	76	18.7
Kansas City, Mo.	324,410	399,746	399,178	456,622	14.4	20	80.6
Kenosha, Wis.	40,472	50,262	48,765	54,368	11.5	212	7.6
Knoxville, Tenn.	77,818	105,802	111,580	124,769	11.8	83	25.4
Lakewood, Ohio	41,732	70,509	69,160	68,071	-1.6	171	5.6
Lancaster, Pa.	53,150	59,949	61,345	63,774	4.0	186	4.3
Lansing, Mich.	57,327	78,397	78,753	92,129	17.0	121	14.1
Laredo, Tex.	22,710	32,618	39,274	51,910	32.2	221	13.5
Lawrence, Mass.	94,270	85,068	84,323	80,536	-4.5	140	6.7
Lexington, Ky.	41,534	45,736	49,304	55,534	12.6	209	5.7
Lima, Ohio	41,326	42,287	44,711	50,246	12.4	231	7.7
Lincoln, Nebr.	54,948	75,933	81,984	98,884	20.6	109	23.8
Little Rock, Ark.	65,142	81,679	88,039	102,213	16.1	105	21.0
Long Beach, Calif.	55,593	142,032	164,271	250,767	52.7	41	34.7
Lorain, Ohio	37,295	44,512	44,125	51,202	16.0	226	11.0
Los Angeles, Calif.	576,673	1,238,048	1,504,277	1,970,358	31.0	4	450.9
Louisville, Ky.	234,891	307,745	319,077	369,129	15.7	30	39.9
Lowell, Mass.	112,759	100,234	101,389	97,249	-4.1	111	12.9
Lubbock, Tex.	4,051	20,520	31,853	71,747	125.2	163	17.0
Lynn, Mass.	99,148	102,320	98,123	99,738	1.6	107	10.4
McKeesport, Pa.	46,781	54,632	55,355	51,502	-7.0	223	3.5
Macon, Ga.	52,995	53,829	57,865	70,252	21.4	169	12.0
Madison, Wis.	38,378	57,899	67,447	96,056	42.4	114	15.4
Malden, Mass.	49,103	58,036	58,010	59,804	3.1	195	4.8
Manchester, N. H.	78,384	76,834	77,685	82,732	6.5	134	32.1
Medford, Mass.	39,038	59,714	63,083	66,113	4.8	178	8.1
Memphis, Tenn.	162,351	253,143	292,942	396,000	35.2	26	104.2
Miami, Fla.	29,571	110,637	172,172	249,276	44.8	42	34.2
Milwaukee, Wis.	457,147	578,249	587,472	637,392	8.5	13	50.0
Minneapolis, Minn.	380,582	464,356	492,370	521,718	6.0	17	53.8
Mobile, Ala.	60,777	68,202	78,720	129,009	63.9	77	25.4
Montgomery, Ala.	43,464	66,079	78,084	106,525	36.4	100	26.1
Mount Vernon, N. Y.	42,726	61,499	67,362	71,899	6.7	162	4.1

City	1920 population	1930 population	1940 population	1950 population	% increase, 1940-50	1950 rank	Area, sq. mi.*
Muncie, Ind.	36,524	46,548	49,720	58,479	17.6	200	10.0
Nashville, Tenn.	118,342	153,866	167,402	174,307	4.1	56	22.0
New Bedford, Mass.	121,217	112,597	110,341	109,189	-1.0	96	19.1
New Britain, Conn.	59,316	68,128	68,685	73,726	7.3	156	13.7
New Haven, Conn.	162,537	162,655	160,605	164,443	2.4	59	17.9
New Orleans, La.	387,219	458,762	494,537	570,445	15.3	16	199.4
New Rochelle, N. Y.	36,213	54,000	58,408	59,725	2.3	196	9.9
New York, N. Y.	5,620,048	6,930,446	7,454,995	7,891,957	5.9	1	315.1
Bronx borough	732,016	1,265,258	1,394,711	1,451,277	4.1	...	43.4
Brooklyn borough	2,018,356	2,560,401	2,698,285	2,738,175	1.5	...	76.1
Manhattan borough	2,284,103	1,867,312	1,889,924	1,960,101	3.7	...	22.3
Queens borough	469,042	1,079,129	1,297,634	1,550,849	19.5	...	113.0
Richmond borough	116,531	158,346	174,441	191,555	9.8	...	60.3
Newark, N. J.	414,524	442,337	429,760	438,776	2.1	21	23.6
Newton, Mass.	46,054	65,276	69,673	81,994	17.3	136	17.3
Niagara Falls, N. Y.	50,760	75,460	78,029	90,872	16.5	125	12.7
Norfolk, Va.	115,777	129,710	144,332	213,513	47.9	48	28.2
Oak Park, Ill.	39,858	63,982	66,015	63,529	-3.8	188	4.7
Oakland, Calif.	216,261	284,063	302,163	384,575	27.3	27	53.0
Ogden, Utah	32,804	40,272	43,688	57,112	30.7	206	16.6
Oklahoma City, Okla.	91,295	185,389	204,424	243,504	19.1	45	50.8
Omaha, Nebr.	191,601	214,006	223,844	251,117	12.2	40	40.7
Orlando, Fla.	9,282	27,330	36,736	52,367	42.5	219	14.1
Pasadena, Calif.	45,354	76,086	81,864	104,577	27.7	101	21.3
Passaic, N. J.	63,841	62,959	61,394	57,702	-6.0	204	3.1
Paterson, N. J.	135,875	138,513	139,656	139,336	-0.2	66	8.1
Pawtucket, R. I.	64,248	77,149	75,797	81,436	7.4	138	8.6
Peoria, Ill.	76,121	104,969	105,087	111,856	6.4	93	12.9
Philadelphia, Pa.	1,823,779	1,950,961	1,931,334	2,071,605	7.3	3	127.2
Phoenix, Ariz.	29,053	48,118	65,414	106,818	63.3	98	17.1
Pittsburgh, Pa.	588,343	669,817	671,659	676,806	0.8	12	54.2
Pittsfield, Mass.	41,763	49,677	49,684	53,348	7.4	214	40.9
Pontiac, Mich.	34,273	64,928	66,626	73,681	10.6	157	19.8
Port Arthur, Tex.	22,251	50,902	46,140	57,530	24.7	205	12.2
Portland, Maine	69,272	70,810	73,643	77,634	5.4	148	21.6
Portland, Oreg.	258,288	301,815	305,394	373,628	22.3	29	64.1
Portsmouth, Va.	54,387	45,704	50,745	80,039	57.7	141	10.2
Providence, R. I.	237,595	252,981	253,504	248,674	-1.9	43	17.9
Pueblo, Colo.	43,050	50,096	52,162	63,685	22.1	187	10.6
Quincy, Mass.	47,876	71,983	75,810	83,835	10.6	133	16.8
Racine, Wis.	58,593	67,542	67,195	71,193	5.9	167	9.2
Raleigh, N. C.	24,418	37,379	46,897	65,679	40.0	180	11.0
Reading, Pa.	107,784	111,171	110,568	109,320	-1.1	95	8.8
Richmond, Calif.	16,843	20,093	23,642	99,545	321.1	108	14.5
Richmond, Va.	171,667	182,929	193,042	230,310	19.3	46	37.1
Roanoke, Va.	50,842	69,206	69,287	91,921	32.7	122	26.5
Rochester, N. Y.	295,750	328,132	324,975	332,488	2.3	32	36.0
Rockford, Ill.	65,651	85,864	84,637	92,927	9.8	119	14.0
Sacramento, Calif.	65,908	93,750	105,958	137,572	29.8	67	16.9
Saginaw, Mich.	61,903	80,715	82,794	92,918	12.2	120	16.6
St. Joseph, Mo.	77,939	80,935	75,711	78,588	3.8	145	14.1
St. Louis, Mo.	772,897	821,960	816,048	856,796	5.0	8	61.0
St. Paul, Minn.	234,698	271,606	287,736	311,349	8.2	35	52.2
St. Petersburg, Fla.	14,237	40,425	60,812	96,738	59.1	113	52.2
Salt Lake City, Utah	118,110	140,267	149,934	182,121	21.5	52	53.9
San Angelo, Tex.	10,050	25,308	25,802	52,093	101.9	220	28.8
San Antonio, Tex.	161,379	231,542	253,854	408,442	60.9	25	69.5
San Bernardino, Calif.	18,721	37,481	43,646	63,058	44.5	190	19.5
San Diego, Calif.	74,361	147,995	203,341	334,387	64.4	31	99.4
San Francisco, Calif.	506,676	634,394	634,536	775,357	22.2	11	44.6
San Jose, Calif.	39,642	57,651	68,457	95,280	39.2	116	17.0
Santa Monica, Calif.	15,252	37,146	53,500	71,595	33.8	164	8.0
Savannah, Ga.	83,252	85,024	95,996	119,638	24.6	87	14.6
Schenectady, N. Y.	88,723	95,692	87,549	91,785	4.8	123	10.2
Scranton, Pa.	137,783	143,433	140,404	125,536	-10.6	82	24.9
Seattle, Wash.	315,312	365,583	368,302	467,591	27.0	19	70.8
Shreveport, La.	43,874	76,655	98,167	127,206	29.6	80	24.0
Sioux City, Iowa	71,227	79,183	82,364	83,991	2.0	132	45.0
Sioux Falls, S. Dak.	25,202	33,362	40,832	52,696	29.1	217	12.7
Somerville, Mass.	93,091	103,908	102,177	102,351	0.2	104	4.1



City	1920 population	1930 population	1940 1940-50	1950 population	% increase, population	1950 rank	Area, sq. mi.*
South Bend, Ind.	70,983	104,193	101,268	115,911	14.5	89	20.2
South Gate, Calif.		19,632	26,945	51,116	89.7	227	7.0
Spokane, Wash.	104,437	115,514	122,001	161,721	32.6	62	41.5
Springfield, Ill.	59,183	71,864	75,503	81,628	8.1	137	10.4
Springfield, Mass.	129,614	149,900	149,554	162,399	8.6	61	31.7
Springfield, Mo.	39,631	57,527	61,238	66,731	9.0	174	13.6
Springfield, Ohio.	60,840	68,743	70,662	78,508	11.1	147	12.1
Stamford, Conn.	35,096	46,346	47,938	74,293	55.0	154	37.6
Stockton, Calif.	40,296	47,963	54,714	70,853	29.5	168	11.8
Syracuse, N. Y.	171,717	209,326	205,967	220,583	7.1	47	25.3
Tacoma, Wash.	96,965	106,817	109,408	143,673	31.3	65	47.9
Tampa, Fla.	51,608	101,161	108,391	124,681	15.0	84	19.0
Terre Haute, Ind.	66,083	62,810	62,693	64,214	2.4	185	12.2
Toledo, Ohio.	243,164	290,718	282,349	303,616	7.5	36	38.3
Topeka, Kans.	50,022	64,120	67,833	78,791	16.2	144	12.5
Trenton, N. J.	119,289	123,356	124,697	128,009	2.7	79	7.2
Troy, N. Y.	71,996	72,763	70,304	72,311	2.9	160	9.3
Tulsa, Okla.	72,075	141,258	142,157	182,740	28.5	51	26.7
Union City, N. J.	20,651	58,659	56,173	55,537	-1.1	208	1.3
Utica, N. Y.	94,156	101,740	100,518	101,531	1.0	106	15.8
Waco, Tex.	38,500	52,848	55,982	84,706	51.3	131	26.0
Washington, D. C.	437,571	486,869	663,091	802,178	21.0	9	61.4
Waterbury, Conn.	91,715	99,902	99,314	104,477	5.2	103	27.6
Waterloo, Iowa.	36,230	46,191	51,743	65,198	26.0	181	31.3
Wheeling, W. Va.	56,208	61,659	61,099	58,891	-3.6	199	10.4
Wichita, Kans.	72,217	111,110	114,966	168,279	46.4	58	25.7
Wichita Falls, Tex.	40,079	43,690	45,112	68,042	50.8	172	14.1
Wilkes-Barre, Pa.	73,833	86,626	86,236	76,826	-10.9	151	6.9
Wilmington, Del.	110,168	106,597	112,504	110,356	-1.9	94	9.8
Winston-Salem, N. C.	48,395	75,274	79,815	87,811	10.0	127	18.8
Woonsocket, R. I.	49,496	49,376	49,303	50,211	1.8	232	8.6
Worcester, Mass.	179,754	195,311	193,694	203,486	5.1	50	37.0
Yonkers, N. Y.	100,176	134,646	142,598	152,798	7.2	64	17.2
York, Pa.	47,512	55,254	56,712	59,953	5.7	194	4.2
Youngstown, Ohio.	132,358	170,002	167,720	168,330	0.4	57	32.8

\* Land area as of April 1, 1950. NOTE: Increase in population from census to census includes that due to annexation of territory as well as to direct growth.

## Territorial Expansion of the United States

Source: U. S. Bureau of the Census.

Accession	Date	Area, sq. mi. <sup>1</sup>	Accession	Date	Area, sq. mi. <sup>1</sup>
			Virgin Islands of U. S.	1947	133
			Trust territory	1947	8,475
			Total		605,743
			Aggregate, 1950		3,628,130

### CONTINENTAL UNITED STATES

Territory in 1790		888,811
Louisiana Purchase	1803	827,192
Florida	1819	58,560
By treaty with Spain	1819	13,443
Texas	1845	390,144
Oregon	1846	285,580
Mexican Cession	1848	529,017
Gadsden Purchase	1853	29,640
Total		3,022,387

<sup>1</sup> Total land and water area. <sup>2</sup> Leased from Nicaragua for 99 years.

## Population of Possessions

Source: U. S. Bureau of the Census.

Area	1930	1940	1950
United States	122,775,046	131,669,275	150,697,361
Alaska	59,278	72,524	128,643
American Samoa	10,055	12,908	18,937
Canal Zone	39,467	51,827	52,822
Guam	18,509	22,290	59,498
Hawaii	368,336	423,330	499,794
Philippines	13,513,000	16,356,000	
Puerto Rico	1,543,913	1,869,255	2,210,703
Virgin Is. of U. S.	22,012	24,889	26,665
Total	138,349,616	150,502,298	153,694,423

### OUTLYING TERRITORY

Alaska Territory	1867	586,400
Hawaii Territory	1898	6,461
Puerto Rico	1899	3,435
Guam	1899	206
American Samoa	1900	76
Panama Canal Zone	1904	553
Corn Islands <sup>2</sup>	1914	4

## The Working Population of the U. S., 1820-1950

Source: U. S. Bureau of the Census.

Year	Working population		Percent of working population in		Year	Working population		Percent of working population in	
	Number (thousands)	Percent of total population ages 10 and over*	Farm occupation	Nonfarm occupation		Number (thousands)	Percent of total population ages 10 and over*	Farm occupation	Nonfarm occupation
1820.....	2,881	44.4	71.8	28.2	1890.....	23,318	49.2	42.6	57.4
1830.....	3,932	45.5	70.5	29.5	1900.....	29,073	50.2	37.5	62.5
1840.....	5,420	46.6	68.6	31.4	1910.....	37,371	52.2	31.0	69.0
1850.....	7,697	46.8	63.7	36.3	1920.....	42,434	51.3	27.0	73.0
1860.....	10,533	47.0	58.9	41.1	1930.....	48,830	49.5	21.4	78.6
1870.....	12,925	44.4	53.0	47.0	1940.....	52,789	52.2	16.1	83.9
1880.....	17,392	47.3	49.4	50.6	1950.....	60,054	53.5	11.6	88.4

\* For 1820 to 1930, the data relate to the population and gainful workers at ages 10 and over. For 1940 and 1950, the data relate to the population and labor force at ages 14 and over; the farm and nonfarm percentages relate only to the experienced labor force.

## Experienced Civilian Labor Force, 1950 in Thousands

Source: U. S. Department of Commerce.

Total, 14 years & over.....	58,999	Farmers & farm managers.....	4,3
Professional, technical & kindred workers.....	4,988	Managers, officials & proprietors, excl. farm.....	5,0
Accountants & auditors.....	383	Clerical & kindred workers.....	7,0
Actors & actresses.....	18	Bookkeepers.....	7,2
Airplane pilots & navigators.....	14	Cashiers.....	1,8
Architects.....	25	Stenographers, typists & secretaries.....	1,8
Artists & art teachers.....	81	Sales workers.....	4,0
Authors, editors & reporters.....	108	Insurance agents & brokers.....	3,3
Chemists.....	76	Sales & sales clerks.....	3,4
Chiropractors.....	13	Craftsmen, foremen & kindred workers.....	8,7
Clergymen.....	168	Carpenters.....	9,9
College presidents, professors, instructors.....	126	Electricians.....	3,3
Dancers & dancing teachers.....	17	Foremen, not elsewhere classified.....	1,8
Dentists.....	75	Machinists.....	5,5
Draftsmen.....	125	Mechanics & repairmen.....	1,7
Engineers, technical.....	534	Painters, construction & maintenance.....	7,7
Lawyers & judges.....	181	Operators & kindred workers.....	11,1
Librarians.....	56	Private household workers.....	1,7
Musicians & music teachers.....	161	Service workers, except private household.....	4,4
Nurses, professional.....	404	Barbers, beauticians & machinists.....	1,3
Optometrists.....	15	Bartenders.....	1,3
Osteopaths.....	5	Boarding & lodging house keepers.....	7,7
Pharmacists.....	89	Charwomen & cleaners.....	7,7
Photographers.....	55	Cooks, except private household.....	4,4
Physicians & surgeons.....	192	Elevator operators.....	1,3
Radio operators.....	16	Practical nurses.....	1,3
Religious workers.....	42	Waiters & waitresses.....	7,7
Social & welfare workers, except group.....	76	Farm laborers & foremen.....	2,9
Surveyors.....	28	Laborers, except farm & mine.....	3,3
Veterinarians.....	13	Occupation not reported.....	1,7

## Indian Population Residing on Reservations Under Agency Control

(Top 16 agencies by population, 1950)

Source: Bureau of Indian Affairs.

Five Civilized Tribes Agency (Okla.).....	37,382	Pima Agency (Ariz.).....	5,5
Navajo Agency & Reservation (Ariz.).....	32,838	Rosebud Agency (S. Dak.).....	5,5
Navajo Agency & Reservation (N. Mex.).....	20,714	Turtle Mountain Agency (N. Dak.).....	4,4
Southern Plains Agency (Okla.).....	14,841	Papago Agency (Ariz.).....	4,4
United Pueblo Agency (N. Mex.).....	12,935	Hope Agency & Reservation (Ariz.).....	4,4
California Agency (Calif.).....	10,000	Great Lakes Agency (Wis.).....	3,3
Pine Ridge Agency & Reservation (S. Dak.).....	6,636	Blackfeet Agency & Reservation (Mont.).....	3,3
Consolidated Chippewa Agency (Minn.).....	6,376	San Carlos Agency & Reservation (Ariz.).....	3,3

## Women in the Working Population of the U. S., 1870-1950

Source: U. S. Bureau of the Census.

Year	Working women*		
	Number (thousands)	Percent of female population ages 10 and over*	Percent of total working population ages 10 and over*
1870.....	1,917	13.3	14.8
1880.....	2,647	14.7	15.2
1890.....	4,006	17.4	17.2
1900.....	5,319	18.8	18.3
1910.....	7,445	21.5	19.9
1920.....	8,637	21.4	20.4
1930.....	10,752	22.0	22.0
1940.....	12,845	25.4	24.3
1950.....	16,501	28.9	27.5

\* For 1870 to 1930, the data relate to the population and gainful workers at ages 10 and over; for 1940 and 1950, the data relate to the population and labor force at ages 14 and over.

## Percent Unemployed in the Civilian Labor Force, 1929-55

Source: U. S. Bureau of the Census.

Year	Percent unemployed	Year	Percent unemployed
1929.....	3.2	1942.....	4.7
1930.....	8.7	1943.....	1.9
1931.....	15.9	1944.....	1.2
1932.....	23.6	1946.....	3.9
1933.....	24.9	1947.....	3.6
1934.....	21.7	1948.....	3.4
1935.....	20.1	1949.....	5.5
1936.....	16.9	1950.....	5.0
1937.....	14.3	1951.....	3.0
1938.....	19.0	1952.....	2.7
1939.....	17.2	1953.....	2.5
1940.....	14.6	1954.....	5.0
1941.....	9.9	1955.....	4.0

NOTE: These estimates are derived from sample surveys and are subject to sampling variations.

## MARRIAGE AND DIVORCE

### Marriages and Divorces in the United States, 1890-1955

Source: U. S. Public Health Service.

Year	Marriage		Divorce <sup>2</sup>		Year	Marriage		Divorce <sup>2</sup>	
	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>		Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>
1890.....	570,000	9.0	33,461	.5	1927.....	1,201,053	10.1	196,292	1.6
1895.....	620,000	8.9	40,387	.6	1928.....	1,182,497	9.8	200,176	1.7
1900.....	709,000	9.3	55,751	.7	1929.....	1,232,559	10.1	205,876	1.7
1901.....	742,000	9.6	60,984	.8	1930.....	1,126,856	9.2	195,961	1.6
1902.....	776,000	9.8	61,480	.8	1931.....	1,060,914	8.6	188,003	1.5
1903.....	818,000	10.1	64,925	.8	1932.....	981,903	7.9	164,241	1.3
1904.....	815,000	9.9	66,199	.8	1933.....	1,098,000	8.7	165,000	1.3
1905.....	842,000	10.0	67,976	.8	1934.....	1,302,000	10.3	204,000	1.6
1906.....	895,000	10.5	72,062	.8	1935.....	1,327,000	10.4	218,000	1.7
1907.....	936,936	10.8	76,571	.9	1936.....	1,369,000	10.7	236,000	1.8
1908.....	857,461	9.7	76,852	.9	1937.....	1,451,296	11.3	249,000	1.9
1909.....	897,354	9.9	79,671	.9	1938.....	1,330,780	10.3	244,000	1.9
1910.....	948,166	10.3	83,045	.9	1939.....	1,403,633	10.7	251,000	1.9
1911.....	955,287	10.2	89,219	1.0	1940.....	1,595,879	12.1	264,000	2.0
1912.....	1,004,602	10.5	94,318	1.0	1941.....	1,695,999	12.7	293,000	2.2
1913.....	1,021,398	10.5	91,307	.9	1942.....	1,772,132	13.2	321,000	2.4
1914.....	1,025,092	10.3	100,584	1.0	1943.....	1,577,050	11.7	359,000	2.6
1915.....	1,007,595	10.0	104,298	1.0	1944.....	1,452,394	10.9	400,000	2.9
1916.....	1,075,775	10.6	114,000	1.1	1945.....	1,612,992	12.2	485,000	3.5
1917.....	1,144,200	11.1	121,564	1.2	1946.....	2,291,045	16.4	610,000	4.3
1918.....	1,000,109	9.7	116,254	1.1	1947.....	1,991,878	13.9	483,000	3.4
1919.....	1,150,186	11.0	141,527	1.3	1948.....	1,811,155	12.4	408,000	2.8
1920.....	1,274,476	12.0	170,505	1.6	1949.....	1,579,798	10.6	397,000	2.7
1921.....	1,163,863	10.7	159,580	1.5	1950.....	1,667,231	11.1	385,144	2.6
1922.....	1,134,151	10.3	148,815	1.4	1951.....	1,594,694	10.4	381,000	2.5
1923.....	1,229,784	11.0	165,096	1.5	1952.....	1,539,318	9.9	392,000	2.5
1924.....	1,184,574	10.4	170,952	1.5	1953.....	1,546,000	9.8	390,000	2.5
1925.....	1,188,334	10.3	175,449	1.5	1954.....	1,490,000	9.2	379,000	2.4
1926.....	1,202,574	10.2	184,678	1.6	1955.....	1,524,000 <sup>3</sup>	9.3 <sup>3</sup>	.....	...

<sup>1</sup> Per 1,000 population. Divorce rates for 1917-19 and 1941-46 are based on population including armed forces overseas; for 1940 and 1947-52, on population excluding armed forces overseas. Marriage rates for 1917-19 and 1940-52 are based on population excluding armed forces overseas. <sup>2</sup> Includes annulments. <sup>3</sup> Provisional. NOTE: Figures for marriages for all years include partial or complete estimates for some states; figures for divorces are estimated, except for 1900, 1905, 1922-32 and 1950.



# Marital Status of the Population, 1950

Source: U. S. Bureau of the Census.

State and Census division	Males				Females			
	Population 14 yrs. old & over	% distribution*			Population 14 yrs. old & over	% distribution*		
		Single	Married	Widowed or divorced		Single	Married	Widowed or divorced
Alabama.....	1,024,915	26.03	69.10	4.87	1,093,798	19.51	66.21	14.28
Arizona.....	263,546	25.84	67.38	6.78	259,511	18.36	68.05	13.59
Arkansas.....	659,656	24.09	69.76	6.15	675,397	16.84	68.74	14.45
California.....	4,034,180	24.37	68.25	7.38	4,073,341	15.88	67.00	17.12
Colorado.....	489,263	25.76	67.60	6.64	490,550	18.23	67.03	14.74
Connecticut.....	756,080	27.34	66.89	5.77	797,537	23.28	63.74	12.98
Delaware.....	117,542	25.45	68.52	6.03	122,763	20.46	65.96	13.58
D. C.....	301,111	29.58	64.01	6.41	347,872	26.99	56.71	17.30
Florida.....	1,018,121	22.69	70.53	6.78	1,065,169	15.37	67.86	16.77
Georgia.....	1,168,086	26.29	68.86	4.85	1,247,615	18.84	66.03	15.13
Idaho.....	213,170	25.26	68.33	6.41	198,781	16.10	72.69	11.21
Illinois.....	3,309,125	25.56	67.73	6.71	3,418,775	19.74	65.57	14.69
Indiana.....	1,448,831	23.12	70.03	6.85	1,486,515	17.53	68.10	14.37
Iowa.....	968,920	25.55	68.17	6.28	985,169	19.54	66.95	13.51
Kansas.....	712,198	24.44	69.26	6.30	720,732	17.12	68.10	14.18
Kentucky.....	1,039,654	27.16	66.95	5.89	1,048,459	19.96	66.32	13.72
Louisiana.....	914,015	25.86	68.93	5.21	968,553	19.14	66.43	14.43
Maine.....	331,780	27.03	65.50	7.47	342,686	21.67	63.57	14.76
Maryland.....	863,852	26.31	68.01	5.68	884,036	20.09	66.40	13.51
Massachusetts.....	1,733,192	29.58	64.04	6.38	1,905,814	27.01	58.64	14.35
Michigan.....	2,368,024	25.13	68.41	6.46	2,349,955	18.74	68.55	12.71
Minnesota.....	1,101,812	29.56	64.79	5.65	1,099,128	22.73	64.85	12.42
Mississippi.....	723,522	26.45	68.55	5.00	757,568	18.71	67.27	14.02
Missouri.....	1,466,440	23.74	69.24	7.02	1,556,891	18.64	65.64	15.72
Montana.....	227,271	28.98	63.45	7.57	202,470	17.13	69.98	12.89
Nebraska.....	498,732	26.94	67.02	6.04	497,059	19.87	67.05	13.08
Nevada.....	64,807	25.18	65.45	9.37	55,791	12.94	72.64	14.42
New Hampshire.....	197,099	26.90	65.67	7.43	207,945	22.53	62.57	14.90
New Jersey.....	1,838,965	26.34	68.08	5.58	1,931,114	21.35	65.19	13.46
New Mexico.....	233,244	28.32	66.09	5.59	223,050	20.16	68.56	11.28
New York.....	5,616,963	27.59	66.79	5.62	6,033,574	23.15	62.89	13.96
North Carolina.....	1,390,072	29.44	66.62	3.94	1,435,312	22.54	65.39	12.07
North Dakota.....	230,502	34.70	60.51	4.79	207,649	23.10	66.68	10.22
Ohio.....	2,935,808	23.52	69.45	7.03	3,060,868	19.07	66.48	14.45
Oklahoma.....	808,460	23.87	69.51	6.62	822,794	16.13	68.34	15.53
Oregon.....	576,808	22.86	69.60	7.54	561,087	15.14	70.82	14.04
Pennsylvania.....	3,904,893	27.64	66.18	6.18	4,108,599	23.29	63.38	13.33
Rhode Island.....	300,768	30.12	63.87	6.01	319,531	25.40	60.99	13.61
South Carolina.....	688,217	29.53	66.67	3.80	733,249	22.57	64.13	13.30
South Dakota.....	245,727	31.27	63.33	5.40	227,366	20.86	67.86	11.27
Tennessee.....	1,149,299	25.45	69.04	5.51	1,209,638	19.31	66.11	14.58
Texas.....	2,781,613	24.78	69.34	5.88	2,801,565	16.79	68.60	14.61
Utah.....	235,325	25.81	69.31	4.88	234,486	19.12	69.31	11.57
Vermont.....	136,311	28.62	64.42	6.96	141,356	22.89	62.23	14.88
Virginia.....	1,210,799	29.79	65.22	4.99	1,193,627	21.18	65.46	13.36
Washington.....	919,661	25.93	66.57	7.50	862,214	15.44	70.03	14.53
West Virginia.....	700,823	27.29	67.08	5.63	704,919	20.98	66.56	12.46
Wisconsin.....	1,278,770	27.97	65.84	6.19	1,279,013	21.77	65.72	12.51
Wyoming.....	113,645	28.98	64.35	6.67	96,526	15.52	73.30	11.18
New England.....	3,455,230	28.70	64.89	6.41	3,709,869	25.17	60.75	14.08
Middle Atlantic.....	11,360,821	27.40	66.79	5.81	12,073,287	22.91	63.43	13.66
East North Central.....	11,340,558	24.90	68.40	6.70	11,595,126	19.30	66.76	13.94
West North Central.....	5,224,331	26.54	67.23	6.23	5,293,994	19.92	66.32	13.76
South Atlantic.....	7,458,623	27.46	67.42	5.12	7,734,562	20.45	65.57	13.98
East South Central.....	3,937,390	26.23	68.42	5.35	4,109,463	19.42	66.40	14.18
West South Central.....	5,163,744	24.73	69.36	5.91	5,268,309	17.12	68.18	14.70
Mountain.....	1,840,271	26.62	66.89	6.49	1,761,165	17.93	69.17	12.90
Pacific.....	5,530,649	24.47	68.11	7.42	5,496,642	15.73	67.87	16.40
TOTAL U. S.....	55,311,617	26.25	67.62	6.13	57,042,417	20.08	65.75	14.17

\* Total for ages 14 and over = 100%.

## Marriage Information, by State

Sources: *Information Please Almanac* questionnaires to states; and U. S. Public Health Service.

State	Legal minimum marriage age				Blood test required	Waiting period		Marriages <sup>1</sup>	
	With parental consent		Without parental consent			Before license	After license	1954	1955 <sup>2</sup>
	M	F	M	F					
Alabama.....	17	14	21	18	yes	none	none	19,554	19,809
Arizona.....	18	16	21	18	no	none	none	20,588	21,746
Arkansas.....	18	16	21	18	yes	3 da.	none	16,099 <sup>17</sup>	15,175
California.....	18 <sup>4</sup>	16 <sup>4</sup>	21	18	yes	none	none	77,947	81,831
Colorado.....	16	16	21	18	yes	none	none	12,302 <sup>17</sup>	12,643
Connecticut.....	16	16	21	21	yes	5 da.	none	17,814	17,600
Delaware.....	18	16	21	18	yes	none	24 hr. <sup>5</sup>	2,305	2,306
D. C.....	18	16	21	18	no	3 da.	none	8,235 <sup>17</sup>	8,031
Florida.....	18	16	21	21	yes	3 da.	none	28,296	30,349
Georgia.....	17	14	21	21	yes	5 da.	none	51,698	54,488
Idaho.....	15	15 <sup>6</sup>	18	18	yes	none	none	8,915	8,879
Illinois.....	18	16	21	18	yes	none	none	82,427 <sup>17</sup>	82,880
Indiana.....	18	16	21	18	yes	none	none	66,977 <sup>16</sup>	64,103
Iowa.....	16	14	21	18	yes	none	none	23,228	24,574
Kansas.....	18	16	21	18	yes	3 da.	none	17,222	17,635
Kentucky.....	16	14	21	21	yes	3 da.	none	22,680 <sup>17</sup>	21,884
Louisiana.....	18	16	21	21	yes	none	72 hr. <sup>7</sup>	22,582	21,999
Maine.....	16	16	21	18	yes	5 da.	none	7,986	8,438
Maryland.....	18	16	21	18	no	48 hr.	none	41,597	44,012
Massachusetts.....	18	16	21	18	yes	5 da.	none	34,490 <sup>16</sup>	48,046
Michigan.....	18	16 <sup>18</sup>	18	18	yes	5 da.	none	51,243	54,679
Minnesota.....	18	16	21	18	no	5 da.	none	23,247	24,835
Mississippi.....	14	12	21 <sup>8</sup>	18 <sup>8</sup>	no	none	none	61,381	65,139
Missouri.....	15 <sup>9</sup>	15 <sup>4</sup>	21	18	yes	3 da.	none	33,520 <sup>18</sup>	37,372
Montana.....	18	16	21	18	yes	none	none	6,575	6,492
Nebraska.....	18	16	21	21	yes	none	none	11,307	12,008
Nevada.....	18	16	21	18	no	none	none	49,432 <sup>17</sup>	51,946
New Hampshire.....	14	13	20	18	yes	5 da.	none	6,934	7,141
New Jersey.....	18 <sup>15</sup>	16 <sup>15</sup>	21	18	yes	72 hr.	none	39,744	41,193
New Mexico.....	18	16	21	18	no	none	none	19,500 <sup>16</sup>	22,300 <sup>16</sup>
New York.....	16	14 <sup>10</sup>	21	18	yes	none	( <sup>11</sup> )	123,060	125,349
North Carolina.....	16	16	18	18	yes	none <sup>8</sup>	none	25,660 <sup>17</sup>	26,102
North Dakota.....	18	15	21	18	yes	none	none	4,437	4,151
Ohio.....	18	16	21	21	yes	5 da.	none	58,921	61,530
Oklahoma.....	18	15	21	18	yes	none	none	24,503 <sup>16</sup>	27,172
Oregon.....	18	15	21	18	yes	3 da.	none	9,567	10,648
Pennsylvania.....	16 <sup>12</sup>	16 <sup>12</sup>	21	21	yes	3 da.	none	72,934	78,286
Rhode Island.....	18	16	21	21	yes	5 da.	none	6,110	6,189
South Carolina.....	18	14	18	18	no	24 hr.	none	45,374	46,485
South Dakota.....	18	15	21	18	yes	none	none	6,102	6,137
Tennessee.....	16	16	21	21	yes	3 da. <sup>9</sup>	none	22,513	23,398
Texas.....	16	14	21	18	yes	none	none	89,018	91,374
Utah.....	16	14	21	18	yes	none	none	6,300	6,691
Vermont.....	18	16	21	18	yes	none	5 da.	3,178	3,139
Virginia.....	18	16	21	21	yes	none	none	36,150	37,005
Washington.....	15	15	21	18	no	3 da.	none	28,780 <sup>17</sup>	29,382
West Virginia.....	18	16	21	21	yes	3 da.	none	13,608 <sup>18</sup>	15,012
Wisconsin.....	14	15	21	18	yes	5 da.	none	24,921	25,600
Wyoming.....	18	16	21	21	yes	none	none	3,113	2,986

<sup>1</sup> By place of occurrence. <sup>2</sup> Provisional figures. Data represent marriages reported for 22 states, marriage intentions filed for 1 state, and marriage licenses issued for remaining states. <sup>3</sup> State recognizes common-law marriages. <sup>4</sup> Males under 18 and females under 16 may be married with consent of parents, provided Superior Court gives its permission. <sup>5</sup> 96 hr. if nonresidents. <sup>6</sup> If under 15, order must be obtained from Circuit or Probate Court. <sup>7</sup> Unless certificate signed by district judge is procured. <sup>8</sup> Except in Pamlico County, 48 hr. <sup>9</sup> Except by court order or sworn by judge to be over 21. <sup>10</sup> Females 14-16 years old must have consent of Judge of Children's Court. <sup>11</sup> Marriage may not be solemnized within 3 days from date on which specimen was taken for serological test, and not until 4 hr. after issuance of marriage license. <sup>12</sup> Orphans' Court may approve issuance of license to one younger than 16 years. <sup>13</sup> Consent of 1 parent or guardian necessary for female only. <sup>14</sup> County judge may give written permission to marry to male under 18 in order to prevent child fathered by applicant from being born out of wedlock. <sup>15</sup> If male is under 18 or female under 16, consent required must be approved in writing by any judge of the county court or of the county court of juvenile and domestic relations. <sup>16</sup> Estimated. <sup>17</sup> Marriage licenses. <sup>18</sup> Incomplete.

# Divorce Information, by State

Sources: Information Please Almanac questionnaires to states; and U. S. Public Health Service.

State	Residence for divorce	Period before parties may remarry		Divorces <sup>1</sup>	
		Plaintiff	Defendant	1953 <sup>2</sup>	1954 <sup>2</sup>
Alabama.....	1 yr.	60 da. <sup>3</sup>	60 da. <sup>3</sup>	9,281	8,916
Arizona.....	1 yr.	1 yr.	1 yr.	5,125	4,790 <sup>7</sup>
Arkansas.....	90 da.	none	none	8,234	7,917 <sup>5</sup>
California.....	1 yr. <sup>21</sup>	1 yr.	1 yr.	40,196	42,093
Colorado.....	1 yr.	6 mo.	6 mo.	4,300 <sup>7</sup>	4,303 <sup>7</sup>
Connecticut.....	3 yr.	none	none	2,825	2,876
Delaware.....	2 yr.	none	none	603	655
D. C.....	1 yr. <sup>4</sup>	6 mo.	6 mo.	1,568	1,140
Florida.....	90 da.	none	[none]	20,139	19,387
Georgia.....	1 yr.	30 da.	30 da.	6,843 <sup>5</sup>	7,041 <sup>5</sup>
Idaho.....	6 wk.	none	none	2,584	2,523
Illinois.....	1 yr.	none	none	21,801	.....
Indiana.....	1 yr.	none	none	12,388 <sup>7</sup>	11,856 <sup>7</sup>
Iowa.....	1 yr.	1 yr. <sup>18</sup>	1 yr. <sup>18</sup>	5,253	5,217
Kansas.....	1 yr.	6 mo.	6 mo.	5,394	5,324
Kentucky.....	1 yr.	none	none	.....	.....
Louisiana.....	1 yr.	none <sup>8</sup>	none <sup>8</sup>	.....	.....
Maine.....	6 mo.	none	none	2,177	2,093
Maryland.....	1 yr.	none	none	5,207	5,111
Massachusetts.....	5 yr.	6 mo.	2 yr.	6,473	5,835 <sup>7</sup>
Michigan.....	1 yr.	none	( <sup>9</sup> )	16,537 <sup>5</sup>	16,281 <sup>5</sup>
Minnesota.....	1 yr.	6 mo.	6 mo.	4,118	4,029
Mississippi.....	1 yr.	( <sup>10</sup> )	( <sup>10</sup> )	5,204	5,001
Missouri.....	1 yr.	none	none	12,342	11,705 <sup>5</sup>
Montana.....	1 yr.	none	none	1,986	1,966
Nebraska.....	1 yr.	6 mo.	6 mo.	2,367	2,427
Nevada.....	6 wk.	none	none	10,127	9,502
New Hampshire.....	1 yr.	none	none	1,112	1,067
New Jersey.....	2 yr.	none <sup>22</sup>	none <sup>22</sup>	4,791	4,609
New Mexico.....	1 yr. <sup>20</sup>	none	none	.....	2,500 <sup>7</sup>
New York.....	( <sup>11</sup> )	none	3 yr. <sup>12</sup>	.....	.....
North Carolina.....	2 yr.	none	none	.....	.....
North Dakota.....	1 yr.	( <sup>4</sup> )	( <sup>4</sup> )	580	554
Ohio.....	1 yr.	none	none	23,278	21,665
Oklahoma.....	1 yr.	6 mo.	6 mo.	13,038 <sup>7</sup>	12,846 <sup>7</sup>
Oregon.....	1 yr.	6 mo.	6 mo.	6,372	6,130
Pennsylvania.....	1 yr.	none	none	12,187	11,698
Rhode Island.....	2 yr.	none	none	797	.....
South Carolina.....	1 yr.	none	none	2,334 <sup>5</sup>	2,425 <sup>5</sup>
South Dakota.....	1 yr.	none	none <sup>14</sup>	928	954
Tennessee.....	2 yr.	none	none <sup>13</sup>	7,699	7,866
Texas.....	1 yr.	1 yr. <sup>13</sup>	1 yr. <sup>13</sup>	39,000 <sup>7</sup>	36,000 <sup>5</sup>
Utah.....	3 mo.	6 mo.	6 mo.	2,422	2,140
Vermont.....	1 yr.	none	2 yr. <sup>16</sup>	479	542
Virginia.....	1 yr.	4 mo.	4 mo.	8,009	7,262
Washington.....	1 yr.	none	none	8,819 <sup>7</sup>	8,321 <sup>7</sup>
West Virginia.....	1 yr. <sup>15</sup>	60 da. <sup>17</sup>	60 da. <sup>17</sup>	.....	.....
Wisconsin.....	2 yr.	1 yr.	1 yr.	5,011	4,887
Wyoming.....	60 da.	none	none	1,204 <sup>5</sup>	1,185 <sup>5</sup>

<sup>1</sup> Include reported annulments. <sup>2</sup> Leaders (....) indicate data unavailable. <sup>3</sup> Divorced persons may remarry each other at any time. <sup>4</sup> At discretion of court. <sup>5</sup> Incomplete. <sup>6</sup> 2 yr. if cause for divorce occurred outside D. C. <sup>7</sup> Estimated. <sup>8</sup> For husband; 10 mo. for wife. In case of adultery, guilty party cannot marry accomplice. <sup>9</sup> At discretion of court; or in case of children under 18, 6-mo. waiting period. <sup>10</sup> Until court is adjourned that grants the divorce. <sup>11</sup> Action for divorce may be maintained where: (1) both parties were residents of state when offense was committed; (2) parties were married within state; (3) plaintiff was resident of state when offense was committed and is resident when action is commenced; (4) offense was committed within state and injured party is resident of state when action is commenced. <sup>12</sup> By modification of decree by court. <sup>13</sup> Party guilty of adultery may never marry; the correspondent. <sup>14</sup> In case of adultery, guilty party may not marry, except to innocent party, until death of innocent party. <sup>15</sup> Period may be shortened by court. <sup>16</sup> 2 years if residence is acquired after cause of divorce action arose. No residence required in case of adultery if personal service can be had within state. <sup>17</sup> Attorney can lengthen waiting period if desired. <sup>18</sup> Unless otherwise set out by judge. <sup>19</sup> For cruelty only, but technically not usual observed. <sup>20</sup> Servicemen acquire residence by being continuously stationed at military base in state for 1 year. <sup>21</sup> Must have resided in county for 3 mo. <sup>22</sup> 3-mo. period between first and final judgment.



# Grounds for Divorce

Source: Information Please Almanac questionnaires to the states.

State	Adultery	Cruelty	Desertion	Alcoholism	Impotence	Felony conviction	Neglect to provide	Insanity	Pregnancy at marriage <sup>1</sup>	Bigamy	Separation	Indignities	Drug addiction	Violence	Fraudulent contract	Others
Alabama	yes	yes	yes <sup>2</sup>	yes	...	yes <sup>30</sup>	yes <sup>1</sup>	yes <sup>4</sup>	yes	...	...	...	yes	yes	...	(5)
Arizona	yes	yes	yes	yes	yes	yes <sup>6</sup>	yes	...	yes	yes	yes <sup>4</sup>	yes	yes	yes	yes	(5, 7-12)
Arkansas	yes	yes	yes <sup>2</sup>	yes	yes	yes	yes	...	...	yes	yes <sup>14</sup>	yes	yes	yes	yes	(12, 15, 16)
California	yes	yes	yes	yes	yes	yes	yes	yes <sup>14</sup>	...	yes	...	...	...	...	...	...
Colorado	yes	yes	yes <sup>2</sup>	yes	yes	yes	yes	yes <sup>4</sup>	...	yes	yes <sup>2</sup>	...	yes	yes	...	(7)
Connecticut	yes	yes	yes <sup>14</sup>	yes	...	yes <sup>18</sup>	...	yes <sup>4</sup>	...	...	...	...	...	...	...	(10, 17, 19)
Delaware	yes	yes	yes <sup>1</sup>	yes <sup>3</sup>	...	yes <sup>20</sup>	yes	yes <sup>4</sup>	...	yes	...	...	...	...	yes	(21-22)
D. C.	yes	...	yes <sup>1</sup>	...	...	yes	...	...	...	...	yes <sup>4</sup>	...	...	...	...	...
Florida	yes	yes	yes <sup>1</sup>	...	yes	...	...	...	...	yes	...	...	...	...	...	(12, 17, 24, 47)
Georgia	yes	yes	yes <sup>2</sup>	yes	yes	yes <sup>20</sup>	...	yes	yes	...	...	...	...	...	yes	(12, 16)
Idaho	yes	yes	yes	...	...	...	yes	yes <sup>14</sup>	...	yes	...	...	...	...	...	(17, 51)
Illinois	yes	yes	yes <sup>2</sup>	yes <sup>3</sup>	yes	yes	...	...	...	yes	...	...	...	...	...	(10, 26, 27)
Indiana	yes	yes	yes <sup>1</sup>	yes	yes	...	yes <sup>3</sup>	yes <sup>4</sup>	...	...	...	...	...	...	...	(10)
Iowa	yes	yes	yes <sup>3</sup>	yes	...	yes	...	...	...	...	...	...	...	...	...	...
Kansas	yes	yes	yes <sup>2</sup>	yes	yes	yes	...	yes <sup>4</sup>	yes	yes	...	...	...	...	yes	(12, 16)
Kentucky	yes	yes	yes	yes	yes	yes	...	yes <sup>4</sup>	yes	...	yes <sup>4</sup>	...	...	yes	yes	(11, 28, 29)
Louisiana	yes	yes	yes	yes	...	yes	...	...	...	...	yes <sup>3</sup>	...	...	...	...	(26, 30)
Maine	yes	yes	yes	yes	yes	yes <sup>18</sup>	yes	...	...	yes	...	yes	yes	...	...	(15)
Maryland	yes	...	yes <sup>21</sup>	...	yes	yes <sup>22</sup>	...	yes <sup>14</sup>	...	...	yes <sup>14</sup>	...	...	...	...	(38)
Massachusetts	yes	yes	yes <sup>15</sup>	yes	...	yes <sup>24</sup>	yes	...	...	...	...	...	yes	...	...	(24)
Michigan	yes	yes	yes <sup>2</sup>	yes	yes	yes <sup>25</sup>	yes	yes	...	...	yes <sup>3</sup>	...	...	...	...	...
Minnesota	yes	yes	yes <sup>2</sup>	yes <sup>2</sup>	yes	yes	...	yes <sup>4</sup>	...	...	yes <sup>3</sup>	...	...	...	...	...
Mississippi	yes	yes	yes	yes	yes	yes	...	yes <sup>15</sup>	yes	yes	yes <sup>2</sup>	...	yes	yes	...	(7, 12, 14)
Missouri	yes	yes	yes	yes	yes	yes	...	...	yes	yes	...	yes	...	...	...	(7-10)
Montana	yes	yes	yes	...	...	yes	yes	yes	...	...	...	...	...	...	...	(17)
Nebraska	yes	yes	yes	yes	yes	yes <sup>25</sup>	yes	yes <sup>4</sup>	...	...	...	...	...	...	...	...
Nevada	yes	yes	yes <sup>2</sup>	yes	yes	yes	yes	yes <sup>3</sup>	...	...	...	...	...	...	...	(10, 36)
New Hampshire	yes	yes	yes <sup>14</sup>	yes	yes <sup>1</sup>	yes <sup>14</sup>	...	...	...	...	...	...	...	yes	...	(18, 28, 35)
New Jersey	yes	yes	yes <sup>3</sup>	...	...	...	...	...	...	...	...	...	...	...	...	(49)
New Mexico	yes	yes	yes	yes	yes	yes	yes	yes	yes	...	...	...	...	...	...	...
New York	yes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Carolina	yes	...	...	...	yes	...	...	yes <sup>27</sup>	yes	...	yes <sup>4</sup>	...	...	...	...	(5)
North Dakota	yes	yes	yes <sup>2</sup>	yes <sup>2</sup>	...	yes	yes <sup>2</sup>	yes <sup>4</sup>	...	...	...	yes <sup>2</sup>	...	...	...	...
Ohio	yes	yes	...	yes <sup>14</sup>	yes	yes	...	...	...	yes	...	...	...	...	yes	(15, 24, 38)
Oklahoma	yes	yes	yes <sup>2</sup>	yes	yes	yes	...	yes <sup>4</sup>	yes	...	...	...	...	...	yes	(24, 39, 49)
Oregon	yes	yes	yes <sup>2</sup>	yes <sup>28</sup>	yes	...	...	yes <sup>14</sup>	...	...	...	yes	...	...	...	...
Pennsylvania	yes	yes	yes <sup>1</sup>	...	yes <sup>45</sup>	yes <sup>20</sup>	...	...	...	yes	...	yes	...	...	yes	(12)
Rhode Island	yes	yes	yes <sup>4</sup>	yes	yes	...	yes	...	...	...	...	...	yes	...	...	(40)
South Carolina	yes	yes	yes <sup>2</sup>	yes	...	...	...	...	...	...	...	...	...	...	...	...
South Dakota	yes	yes <sup>2</sup>	yes <sup>2</sup>	...	...	yes	yes <sup>2</sup>	yes <sup>2</sup>	...	...	...	...	...	...	...	(7)
Tennessee	yes	yes	yes <sup>2</sup>	yes	yes	yes	yes	...	yes	yes	...	...	...	...	...	(10, 25, 41, 45)
Texas	yes	yes	yes <sup>14</sup>	...	...	yes <sup>8</sup>	...	yes <sup>4</sup>	...	...	yes <sup>22</sup>	yes	...	yes	...	...
Utah	yes	yes	yes	yes	yes	yes	yes	yes	...	...	yes <sup>14</sup>	...	...	...	...	...
Vermont	yes	yes	yes <sup>14</sup>	...	...	yes <sup>25</sup>	yes	yes <sup>4</sup>	...	...	yes <sup>14</sup>	...	...	...	...	(19)
Virginia	yes	...	yes <sup>2</sup>	...	yes	yes	...	...	yes	...	...	...	...	...	...	(5, 18, 42, 43)
Washington	yes	yes	yes <sup>2</sup>	yes	yes	yes	yes	yes <sup>3</sup>	...	yes <sup>4</sup>	yes	...	...	yes	...	...
West Virginia	yes	yes	yes <sup>1</sup>	yes	...	...	...	...	...	...	...	yes	...	...	...	...
Wisconsin	yes	yes	yes <sup>2</sup>	yes	yes	yes <sup>45</sup>	...	...	...	yes <sup>4</sup>	...	...	...	...	...	(44)
Wyoming	yes	yes	yes <sup>2</sup>	yes	yes	yes	yes <sup>2</sup>	yes <sup>3</sup>	yes	...	yes <sup>3</sup>	yes	...	...	...	(8, 9, 45)

<sup>1</sup> If unknown to husband. <sup>2</sup> 1 year. <sup>3</sup> 2 years. <sup>4</sup> 5 years. <sup>5</sup> Crime against nature. <sup>6</sup> With imprisonment of 1 year. <sup>7</sup> Absence of 1 year. <sup>8</sup> Felony before marriage. <sup>9</sup> Husband a vagrant. <sup>10</sup> Infamous crime. <sup>11</sup> Loathsome disease. <sup>12</sup> Relationship within prohibited degree. <sup>13</sup> Wife a prostitute. <sup>14</sup> 3 years. <sup>15</sup> Absence of 3 years. <sup>16</sup> Insanity at time of marriage. <sup>17</sup> Habitual intemperance. <sup>18</sup> With imprisonment for life. <sup>19</sup> Absence of 7 years. <sup>20</sup> With imprisonment of 2 years. <sup>21</sup> Wife under 16 at time of marriage. <sup>22</sup> Defendant obtained divorce from plaintiff in any other state or country. <sup>23</sup> Absence. <sup>24</sup> Attempt by one party on life of other. <sup>25</sup> Infected other party with communicable venereal disease. <sup>26</sup> Joining a religious cult disbelieving in marriage. <sup>27</sup> Unchaste behavior of wife after marriage. <sup>28</sup> Public defamation. <sup>29</sup> 18 months. <sup>30</sup> With imprisonment of 3 years, 18 months of which have been served. <sup>31</sup> Any cause which, by laws of state, renders marriage null and void at its inception. <sup>32</sup> With imprisonment of 5 years. <sup>33</sup> With imprisonment of 3 years. <sup>34</sup> Noncohabitation for 3 years. <sup>35</sup> 10 years. <sup>36</sup> 1 year, if contracted after marriage. <sup>37</sup> Gross neglect of duty. <sup>38</sup> Any other gross misbehavior or wickedness. <sup>39</sup> Absence of 2 years. <sup>40</sup> Infamous crime before marriage. <sup>41</sup> Fugitive from justice and absent for 2 years. <sup>42</sup> Absence of 5 years. <sup>43</sup> If at time of marriage and incurable. <sup>44</sup> Indignities. <sup>45</sup> Ungovernable temper. <sup>46</sup> Noncohabitation for 2 years. <sup>47</sup> Incompatibility. <sup>48</sup> Imprisonment for 2 years, sentence being for 7 years or more. <sup>49</sup> Noncohabitation for 5 years. <sup>50</sup> 7 years.

## Percent of Population Ever Married: U. S., 1890-1955

Source: U. S. Bureau of the Census.

Age group, years	1890	1900	1910	1920	1930	1940	1950	1955
Males								
14-19.....	0.4	0.9	1.0	1.8	1.5	1.5	2.9	2.9
20-24.....	19.2	22.1	24.6	29.0	28.9	27.8	41.0	51.2
25-29.....	53.8	54.0	56.9	60.3	63.1	64.0	76.2	71.9
30-34.....	73.3	72.2	73.7	75.7	78.7	79.3	86.8	85.1
35-44.....	84.5	82.9	83.1	83.7	85.6	86.0	90.4	91.1
45-54.....	90.7	89.6	88.7	87.8	88.5	88.9	91.5	91.5
Females								
14-19.....	8.0	9.4	9.7	10.8	10.9	10.0	14.4	14.2
20-24.....	48.1	48.3	51.4	54.3	53.8	52.8	67.7	70.9
25-29.....	74.5	72.4	74.9	76.8	78.2	77.2	86.7	88.4
30-34.....	84.8	83.3	83.8	85.0	86.7	85.3	90.7	92.9
35-44.....	90.1	88.8	88.5	88.6	89.9	89.6	91.7	93.1
45-54.....	92.9	92.1	91.4	90.3	90.8	91.3	92.2	93.2

## Marriage Prospects of Single Men and Women

Source: U. S. Bureau of the Census.

Age	Per cent of population single <sup>1</sup>		Per cent who ever marry <sup>2</sup>		Age	Per cent of population single <sup>1</sup>		Per cent who ever marry <sup>2</sup>	
	Male	Female	Male	Female		Male	Female	Male	Female
15.....	99.1	98.0	92.2	93.5	33.....	11.9	8.3	58.5	42.1
16.....	99.2	94.0	92.4	93.5	34.....	11.0	8.1	54.1	38.0
17.....	98.4	86.4	92.5	93.5	35.....	10.9	9.3	49.7	34.3
18.....	96.1	75.6	92.6	93.3	36.....	10.3	8.1	45.6	31.0
19.....	90.7	62.4	92.7	92.9	37.....	9.7	7.8	41.6	27.9
20.....	82.2	50.0	92.6	92.1	38.....	9.9	8.3	38.1	25.2
21.....	70.2	38.7	92.3	90.8	39.....	8.9	7.5	34.8	22.6
22.....	58.6	30.1	91.8	89.0	40.....	9.9	9.3	31.7	20.2
23.....	47.1	23.9	90.0	86.3	41.....	8.5	7.5	28.8	18.1
24.....	38.4	19.8	89.6	82.8	42.....	8.8	8.1	26.0	16.1
25.....	32.2	16.5	88.0	78.5	43.....	8.2	7.5	23.5	14.4
26.....	27.6	15.0	85.9	73.7	44.....	8.7	7.7	21.2	12.8
27.....	22.7	12.7	83.4	68.9	45.....	9.5	8.9	19.1	11.3
28.....	19.4	11.6	80.3	64.4	50.....	9.6	8.8	11.1	6.1
29.....	16.6	10.4	76.6	59.9	55.....	8.9	8.0	6.2	3.2
30.....	15.9	10.8	72.3	55.3	60.....	9.2	8.6	3.3	1.6
31.....	13.3	9.2	67.5	50.8	65 and over.....	8.3	8.9	1.9	0.8
32.....	13.1	9.2	63.0	46.4					

<sup>1</sup> Per cent single within specified year of age in 1950, in 3½% sample of population. <sup>2</sup> Per cent of persons single at beginning of year of age who marry during that year and all later years. NOTE: "Single" means those never married; that is, it excludes widowed and divorced. Hence, "marriage prospects" refers to likelihood of first marriage only.

## Median Age at First Marriage in the U. S., 1890-1955

Source: U. S. Bureau of the Census.

Year	Males	Females	Year	Males	Females	Year	Males	Females	Year	Males	Females
1890.....	26.1	22.0	1910.....	25.1	21.6	1930.....	24.3	21.3	1954.....	23.0	20.3
1900.....	25.9	21.9	1920.....	24.6	21.2	1940.....	24.3	21.5	1955*.....	22.7	20.2

\* Provisional.

## BIRTHS

## Live Births and Birth Rates, 1954-55

Source: U. S. Public Health Service.

State	Number			Rate		
	1954	1955	Per cent change	1954	1955	Per cent change
Alabama.....	82,463	81,809	-0.8	27.5	27.0	-1.8
Arizona.....	27,418	28,159	+2.7	29.5	28.7	-2.7
Arkansas.....	43,285	42,186	-2.5	24.1	23.6	-2.1
California.....	300,958	310,862	+3.3	24.1	23.9	-0.8
Colorado.....	39,834	41,009	+2.9	26.6	26.5	-0.4
Connecticut.....	49,361	51,167	+3.7	22.6	22.8	+0.9
Delaware.....	9,961	10,198	+2.4	26.8	26.4	-1.5
D. C.....	31,263	31,248	-0.0	36.8	36.6	-0.5
Florida.....	84,822	89,149	+5.1	25.7	25.8	+0.4
Georgia.....	103,744	101,153	-2.5	28.8	27.9	-3.1
Idaho.....	16,753	16,711	-0.3	28.0	27.4	-2.1
Illinois.....	213,055	216,016	+1.4	23.2	23.1	-0.4
Indiana.....	108,292	108,014	-0.3	25.6	24.9	-2.7
Iowa.....	63,748	64,501	+1.2	23.9	24.0	+0.4
Kansas.....	51,515	50,968	-1.1	25.5	24.7	-3.1
Kentucky.....	76,161	75,030	-1.5	25.6	25.0	-2.3
Louisiana.....	84,942	84,815	-0.1	29.5	29.0	-1.7
Maine.....	21,844	21,747	-0.4	24.5	24.0	-2.0
Maryland.....	62,427	63,540	+1.8	24.0	23.8	-0.8
Massachusetts.....	107,993 <sup>2</sup>	( <sup>2</sup> )	....	21.9 <sup>2</sup>	( <sup>2</sup> )	....
Michigan.....	190,669	194,405	+2.0	27.1	26.9	-0.7
Minnesota.....	79,919	80,170	+0.3	25.5	25.3	-0.8
Mississippi.....	68,239	66,413	-2.7	32.1	31.5	-1.9
Missouri.....	96,701	96,927	+0.2	23.7	23.5	-0.8
Montana.....	17,060	17,202	+0.8	27.6	27.2	-1.4
Nebraska.....	33,554	33,796	+0.7	24.6	24.5	-0.4
Nevada.....	5,738	6,213	+8.3	27.3	27.6	+1.1
New Hampshire.....	12,106	12,355	+2.1	22.0	22.2	+0.9
New Jersey.....	113,427	116,470	+2.7	21.4	21.5	+0.5
New Mexico.....	25,286	25,915	+2.5	32.5	32.6	+0.3
New York.....	338,315	344,683	+1.9	21.4	21.4	0
North Carolina.....	115,776	115,620	-0.1	27.4	27.0	-1.5
North Dakota.....	17,130	17,473	+2.0	27.0	27.2	+0.7
Ohio.....	221,105	221,496	+0.2	25.4	24.7	-2.8
Oklahoma.....	52,125	51,114	-1.9	24.0	23.6	-1.7
Oregon.....	38,114	38,346	+0.6	23.2	23.0	-0.9
Pennsylvania.....	243,971	238,548	-2.2	22.2	21.4	-3.6
Rhode Island.....	19,300	19,175	-0.6	23.1	22.7	-1.7
South Carolina.....	65,426	62,746	-4.1	28.8	27.5	-4.5
South Dakota.....	17,852 <sup>1</sup>	18,813	+5.4	26.6	27.8	+4.5
Tennessee.....	86,861	86,724	-0.2	25.8	25.4	-1.6
Texas.....	241,996	237,715	-1.8	28.5	27.8	-2.5
Utah.....	24,906	25,071	+0.7	32.7	32.1	-1.8
Vermont.....	9,047	9,370	+3.6	24.0	24.8	+3.3
Virginia.....	90,973	89,807	-1.3	25.6	25.1	-2.0
Washington.....	66,805	64,682	-3.2	26.4	25.2	-4.5
West Virginia.....	47,445	45,348	-4.4	23.8	22.7	-4.6
Wisconsin.....	90,975	91,837	+0.9	25.1	24.9	-0.8
Wyoming.....	8,780	8,462	-3.6	29.5	27.7	-6.1

<sup>1</sup> Revised figure supplied by State office. <sup>2</sup> By place of residence. <sup>3</sup> Figure not available. NOTE: Rates are per 1,000 estimated midyear population in each specified area; births are by place of occurrence. Data are provisional.



## Live Births in the United States, 1909-1955

Source: U. S. Public Health Service.

Year	Births <sup>1</sup>	Rate <sup>2</sup>	Year	Births <sup>1</sup>	Rate <sup>2</sup>	Year	Births <sup>1</sup>	Rate <sup>2</sup>
1909.....	2,718,000	30.0	1925.....	2,909,000	25.1	1941.....	2,703,000	20.3
1910.....	2,777,000	30.1	1926.....	2,839,000	24.2	1942.....	2,989,000	22.2
1911.....	2,809,000	29.9	1927.....	2,802,000	23.5	1943.....	3,104,000	22.7
1912.....	2,840,000	29.8	1928.....	2,674,000	22.2	1944.....	2,939,000	21.2
1913.....	2,869,000	29.5	1929.....	2,582,000	21.2	1945.....	2,858,000	20.4
1914.....	2,966,000	29.9	1930.....	2,618,000	21.3	1946.....	3,411,000	24.1
1915.....	2,965,000	29.5	1931.....	2,506,000	20.2	1947.....	3,817,000	26.6
1916.....	2,964,000	29.1	1932.....	2,440,000	19.5	1948.....	3,637,000	24.9
1917.....	2,944,000	28.5	1933.....	2,307,000	18.4	1949.....	3,649,000	24.5
1918.....	2,948,000	28.2	1934.....	2,396,000	19.0	1950.....	3,632,000	24.1
1919.....	2,740,000	26.1	1935.....	2,377,000	18.7	1951.....	3,823,000	24.9
1920.....	2,950,000	27.7	1936.....	2,355,000	18.4	1952.....	3,913,000	25.1
1921.....	3,055,000	28.1	1937.....	2,413,000	18.7	1953.....	3,965,000	25.0
1922.....	2,882,000	26.2	1938.....	2,496,000	19.2	1954.....	4,078,000	25.3
1923.....	2,910,000	26.0	1939.....	2,466,000	18.8	1955.....	4,091,000	24.9
1924.....	2,979,000	26.1	1940.....	2,559,000	19.4			

<sup>1</sup> Adjusted for underregistration and for births in states not in the birth registration area from 1915 to 1932; estimates for earlier years are based upon data for a few states. <sup>2</sup> Rates are per 1,000 population estimated as of July 1 for each year except 1940 and 1950, which are as of April, the census date; for 1941-46 based on population including armed forces overseas.

## Live Births by Order of Birth, 1940-54

Source: U. S. Public Health Service.

Year & race	Total	Birth Order						
		1st	2nd	3rd	4th	5th	6th & 7th	8th & over
1940.....	2,558,647	940,116	639,236	349,941	205,443	131,099	154,138	138,674
1943.....	3,103,530	1,142,594	839,529	443,599	242,679	145,238	157,434	132,457
1944.....	2,938,891	1,000,770	788,293	456,537	251,604	148,554	160,712	132,421
1945.....	2,858,449	961,456	763,494	445,705	248,607	148,251	159,100	131,836
1946.....	3,410,738	1,290,703	934,676	486,813	262,213	151,030	158,035	127,268
1947.....	3,816,770	1,574,001	1,018,873	523,722	266,976	151,703	156,269	125,226
1948.....	3,636,627	1,343,056	1,047,097	545,131	271,888	152,191	155,567	121,697
1949.....	3,648,867	1,234,963	1,092,658	584,175	292,951	158,496	160,328	125,296
1950.....	3,631,512	1,140,398	1,096,716	630,102	314,067	165,808	162,039	122,382
1951 <sup>1</sup> .....	3,822,961	1,195,333	1,116,358	685,721	351,234	180,341	170,285	123,689
1952 <sup>1</sup> .....	3,913,115	1,169,490	1,121,825	732,939	386,813	199,921	178,022	124,105
1953 <sup>1</sup> .....	3,964,750	1,149,993	1,119,751	752,655	412,076	216,238	189,545	124,492
1954 <sup>1</sup> .....	4,078,055	1,159,644	1,119,393	785,066	442,800	234,717	206,708	129,727
White <sup>1</sup> .....	3,474,811	1,019,660	1,001,999	689,554	367,368	178,522	141,268	76,440
Nonwhite <sup>1</sup> .....	603,244	139,984	117,394	95,512	75,432	56,195	65,440	53,287

### Birth Rate

1940.....	79.9	29.3	20.0	10.9	6.4	4.1	4.8	4.3
1943.....	94.3	34.7	25.5	13.5	7.4	4.4	4.8	4.0
1944.....	88.8	30.2	23.8	13.8	7.6	4.5	4.9	4.0
1945.....	85.9	28.9	22.9	13.4	7.5	4.5	4.8	4.0
1946.....	101.9	38.5	27.9	14.5	7.8	4.5	4.7	3.8
1947.....	113.3	46.7	30.3	15.6	7.9	4.5	4.6	3.7
1948.....	107.3	39.6	30.9	16.1	8.0	4.5	4.6	3.6
1949.....	107.1	36.2	32.1	17.1	8.6	4.7	4.7	3.7
1950.....	106.2	33.3	32.1	18.4	9.2	4.8	4.7	3.6
1951 <sup>1</sup> .....	111.3	34.8	32.5	20.0	10.2	5.2	5.0	3.6
1952 <sup>1</sup> .....	113.5	33.9	32.5	21.3	11.2	5.8	5.2	3.6
1953 <sup>1</sup> .....	114.7	33.3	32.4	21.8	11.9	6.3	5.5	3.6
1954 <sup>1</sup> .....	117.6	33.5	32.3	22.6	12.8	6.8	6.0	3.7
White <sup>1</sup> .....	113.1	33.2	32.6	22.4	12.0	5.8	4.6	2.5
Nonwhite <sup>1</sup> .....	152.9	35.5	29.8	24.2	19.1	14.2	16.6	13.5

NOTE: Birth order refers to number of children born alive to mother. Figures are shown to the last digit as computed for convenience in summation. They are not assumed to be accurate to the last digit. Figures for births of order not stated are distributed, including births that occurred in Massachusetts, which did not require the reporting of birth order. Rates are live births per 1,000 female population aged 15-44 years in each specified group. Population enumerated as of April 1 for 1940 and 1950, and estimated as of July 1 for 1943-49 and 1951-54. Births are adjusted for under-registration. <sup>1</sup> Based on data from a 50% sample.

# Crude Birth Rate for Selected Countries, 1938, 1948, 1953, 1955

Source: Statistical Office of the United Nations.

Country	Rate <sup>1</sup>				Country	Rate <sup>1</sup>			
	1938	1948	1953	1955		1938	1948	1953	1955
<b>North America</b>					<b>Europe (cont.)</b>				
Canada <sup>2</sup> .....	20.7	27.3	28.2	28.3	Hungary.....	19.9	19.1	*	*
Costa Rica.....	45.0	43.9	53.9	51.4	Ireland.....	19.4	22.1	21.2	21.2
El Salvador.....	43.7	44.6	47.9	47.0	Italy.....	23.8	21.9	17.7	17.7
Mexico.....	43.5	44.6	45.0	46.2	Luxemburg.....	14.9	14.7	16.0	16.0
Nicaragua.....	34.0	38.6	41.6	*	Netherlands.....	20.5	25.3	21.8	21.4
Panamá <sup>3</sup> .....	45.5	35.6	38.6	40.7	Norway.....	15.4	20.5	18.7	18.7
Puerto Rico.....	38.6	40.2	35.1	34.8	Portugal.....	26.6	26.7	23.4	23.6
United States.....	17.6	24.2	24.6	24.6	Rumania.....	29.6	*	*	*
<b>South America</b>					Spain.....	20.1	23.3	20.6	20.6
Chile.....	32.1	35.3	34.6	35.0	Sweden.....	14.9	18.4	15.4	14.8
Peru <sup>4</sup> .....	*	26.1	35.0	*	Switzerland.....	15.2	19.2	17.0	17.1
Venezuela <sup>5</sup> .....	33.7	39.2	46.1	47.1	United Kingdom.....	15.5	18.1	15.9	15.4
<b>Europe</b>					<b>Asia</b>				
Austria.....	13.9	17.7	14.8	15.5	Ceylon.....	35.9	40.6	39.4	37.9
Belgium.....	16.0	17.6	16.6	16.7	India <sup>6</sup> .....	33.3	25.2	26.7	30.5
Bulgaria.....	22.8	*	*	*	Israel <sup>7</sup> .....	26.3	26.3	30.2	27.2
Czechoslovakia.....	16.7	23.4	21.2	22.2	Japan <sup>8</sup> .....	27.1	33.7	21.5	19.4 <sup>12</sup>
Denmark.....	18.1	20.3	17.9	17.3	<b>Other</b>				
Finland <sup>9</sup> .....	21.0	27.5	21.9	21.0	Australia <sup>9</sup> .....	17.5	23.1	22.9	22.6
France.....	15.0	21.1	18.8	18.4	New Zealand <sup>10</sup> .....	18.0	25.6	24.1	24.9
Germany, West.....	19.7	16.6	15.5	15.7	U. of So. Africa <sup>11</sup> .....	25.0	26.5	25.7	26.0

<sup>1</sup> Number of births per 1,000 population. <sup>2</sup> Excluding Yukon and Northwest Territories. <sup>3</sup> Excluding tribal Indians. <sup>4</sup> Excluding Indian jungle population. <sup>5</sup> Prior to 1951, data relate to Finnish nationals in Finland. <sup>6</sup> Registration area only. <sup>7</sup> Jewish population only. <sup>8</sup> Japanese nationals in Japan only. <sup>9</sup> Excluding full-blooded aborigines. <sup>10</sup> Excluding Maoris. <sup>11</sup> White population only (about 20% of total). <sup>12</sup> Including Amami Islands. \* Not available.

## Live Births and Birth Rates by Race

Source: U. S. Public Health Service.

(Rates per 1,000 population in each specified group, enumerated as of Apr. 1 for 1940 and 1950, and estimated as of July 1 for 1945 including Armed Forces overseas)

Race	Births, 1954*	Rates			Race	Births, 1954*	Rates		
		1950	1945	1940			1950	1945	1940
White.....	3,443,630	22.7	19.1	17.5	Japanese.....	6,382	24.1	22.9	14.8
Negro.....	544,288	31.0	23.3	21.7	Other.....	3,004	18.3	20.7	21.0
Indian.....	15,662	39.0	26.8	28.6	All races.....	4,017,362	23.6	19.5	17.9
Chinese.....	4,396	42.9	17.1	14.2					

\* Based on 50% sample of births.

## Multiple Births in the United States, 1933-50

Source: Statistical Bulletin of the Metropolitan Life Insurance Co.

Age and color of mother	Number of confinements*	Cases of multiple births per million confinements			
		Total	Twins	Triplets	Quadruplets
Total—All ages.....	48,586,704	10,939	10,833	104	1.5
Under 20.....	5,838,182	6,167	6,127	40	.2
20-24.....	15,361,317	8,585	8,519	65	1.0
25-29.....	13,400,847	11,343	11,240	102	1.3
30-34.....	8,299,863	14,347	14,188	157	2.0
35-39.....	4,338,446	17,114	16,890	220	4.4
40-44.....	1,243,764	13,942	13,771	169	1.6
45 and over.....	104,285	8,697	8,592	86	†
<b>Color—All Ages</b>					
White.....	42,538,339	10,621	10,524	96	1.1
Nonwhite.....	6,048,365	13,174	13,005	165	4.3

\* Confinements from which at least one infant was born alive. † Cases too few to warrant computation. Source of basic data: Various reports by the National Office of Vital Statistics. Births reported with age of mother unknown were prorated; the age distributions for 1937, 1938, 1942, and 1943 were estimated by the Statistical Bureau, Metropolitan Life Insurance Company.

## Live Births by Age of Mother;

U. S., 1940-1954

Source: U. S. Public Health Service.

Year and race	Total <sup>1</sup>	Age of mother							45 yrs. and over <sup>2</sup>
		Under 15 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30-34 yrs.	35-39 yrs.	40-44 yrs.	
1940.....	2,558,647	3,865	332,667	799,537	693,268	431,468	222,015	68,269	7,558
1943.....	3,103,530	4,290	369,942	982,617	863,162	538,043	267,005	72,207	6,264
1944.....	2,938,891	4,051	322,098	910,710	803,382	536,622	280,490	75,510	6,028
1945.....	2,858,449	4,028	298,868	832,746	785,299	554,906	296,852	78,853	6,897
1946.....	3,410,738	3,863	339,833	1,090,802	967,946	610,736	311,361	79,648	6,549
1947.....	3,816,770	4,911	445,047	1,254,902	1,069,820	635,647	318,516	81,605	6,322
1948.....	3,636,627	5,337	449,568	1,193,146	1,006,183	597,036	301,096	78,387	5,874
1949.....	3,648,867	5,445	448,768	1,183,647	1,029,851	596,014	301,785	77,585	5,772
1950.....	3,631,512	5,413	432,911	1,155,167	1,041,360	610,816	302,780	77,743	5,322
1951 <sup>3</sup> .....	3,822,961	5,460	456,523	1,220,900	1,090,147	649,542	313,843	81,137	5,409
1952 <sup>3</sup> .....	3,913,115	5,358	449,163	1,232,057	1,120,702	690,940	326,299	83,018	5,578
1953 <sup>3</sup> .....	3,964,750	5,634	466,495	1,239,197	1,126,449	702,219	333,652	85,730	5,374
1954 <sup>3</sup> .....	4,078,055	6,396	488,313	1,275,313	1,137,123	731,850	344,490	89,122	5,448
White <sup>1</sup> .....	3,474,811	2,253	372,279	1,089,427	991,154	640,863	298,111	76,287	4,437
Nonwhite <sup>1</sup> .....	603,244	4,143	116,034	185,886	145,969	90,987	46,379	12,835	1,011

## Birth rate

1940.....	79.9	0.7	54.1	135.6	122.8	83.4	46.3	15.6	1.9
1943.....	94.3	0.8	61.7	164.0	147.8	99.5	52.8	15.7	1.5
1944.....	88.8	0.8	54.3	151.8	136.5	98.1	54.6	16.1	1.4
1945.....	85.9	0.8	51.1	138.9	132.2	100.2	56.9	16.6	1.6
1946.....	101.9	0.7	59.3	181.8	161.2	108.9	58.7	16.5	1.5
1947.....	113.3	0.9	79.3	209.7	176.0	111.9	58.9	16.6	1.4
1948.....	107.3	1.0	81.8	200.3	163.4	103.7	54.5	15.7	1.3
1949.....	107.1	1.0	83.4	200.1	165.4	102.1	53.5	15.3	1.3
1950.....	106.2	1.0	81.6	196.6	166.1	103.7	52.9	15.1	1.2
1951.....	111.3	1.0	86.9	212.0	174.2	108.3	54.1	15.3	1.2
1952.....	113.5	0.9	85.4	218.1	180.4	113.1	56.1	15.3	1.2
1953 <sup>3</sup> .....	114.7	0.9	87.5	224.5	183.8	113.0	57.3	15.5	1.1
1954 <sup>3</sup> .....	117.6	1.0	89.8	235.6	188.5	116.4	58.8	15.8	1.1
White <sup>1</sup> .....	113.1	0.4	78.5	229.4	186.0	114.2	56.8	15.1	1.0
Nonwhite <sup>1</sup> .....	152.9	5.3	166.5	280.4	207.6	134.0	76.9	21.4	2.1

NOTE: Births are adjusted for underregistration. Figures are shown to the last digit as computed for convenience in summation. They are not assumed to be accurate to the last digit. Figures for age of mother not stated are distributed. Rates are live births per 1,000 female population in each specified group, enumerated as of April 1 for 1940 and 1950, and estimated as of July 1 for 1943-49 and 1951-54. Figures for age of mother not stated are distributed. <sup>1</sup> Rates computed by relating total births, regardless of age of mother, to female population aged 15-44 years. <sup>2</sup> Rates computed by relating births to mothers 45 years and over, to female population aged 45-49 years. <sup>3</sup> Based on data from a 50% sample.

## Households, Families and Married Couples in the United States from 1890 to 1956

Source: U. S. Bureau of the Census.

Date	Households		Families		Married couples
	Number	Average population per household	Number	Average population per family	
June 1890.....	12,690,000	4.93	—	—	—
April 1930.....	29,905,000	4.01	—	—	25,174,000
April 1940.....	34,949,000	3.67	32,166,000	3.76	28,517,000
March 1950.....	43,554,000	3.37	39,303,000	3.54	36,091,000
March 1956.....	48,785,000	3.33	42,843,000	3.59	38,306,000



# Number of Families in the U. S., April 1940 and 1950

Source: Statistical Bulletin of the Metropolitan Life Insurance Company. Compiled from various reports of the Bureau of the Census.

State	1940	1950	Per cent increase	Persons per family, 1950
Alabama.....	646,000	729,765	13	3.98
Arizona.....	116,000	181,985	57	3.77
Arkansas.....	472,000	477,200	1	3.78
California.....	1,816,000	2,827,110	56	3.29
Colorado.....	278,000	338,205	22	3.51
Connecticut.....	412,000	512,280	24	3.59
Delaware.....	64,000	79,730	25	3.65
D. C.....	165,000	198,180	20	3.26
Florida.....	473,000	721,460	53	3.44
Georgia.....	715,000	824,095	15	3.91
Idaho.....	128,000	148,710	16	3.67
Illinois.....	2,008,000	2,287,955	14	3.45
Indiana.....	892,000	1,039,105	16	3.50
Iowa.....	644,000	686,785	7	3.49
Kansas.....	460,000	507,665	10	3.42
Kentucky.....	671,000	717,535	7	3.86
Louisiana.....	554,000	648,410	17	3.87
Maine.....	201,000	223,175	11	3.75
Maryland.....	431,000	581,840	35	3.68
Massachusetts.....	1,025,000	1,171,805	14	3.62
Michigan.....	1,308,000	1,624,875	24	3.62
Minnesota.....	665,000	747,680	12	3.63
Mississippi.....	504,000	508,960	1	4.04
Missouri.....	986,000	1,057,260	7	3.41
Montana.....	133,000	145,775	10	3.62
Nebraska.....	327,000	344,720	5	3.51
Nevada.....	27,000	40,945	52	3.37
New Hampshire.....	120,000	134,255	12	3.59
New Jersey.....	1,030,000	1,263,570	23	3.54
New Mexico.....	119,000	159,885	34	3.97
New York.....	3,379,000	3,862,050	14	3.47
North Carolina.....	772,000	939,215	22	4.07
North Dakota.....	139,000	144,855	4	3.94
Ohio.....	1,761,000	2,077,595	18	3.53
Oklahoma.....	587,000	590,840	1	3.50
Oregon.....	291,000	411,690	41	3.34
Pennsylvania.....	2,345,000	2,639,925	13	3.68
Rhode Island.....	167,000	198,630	19	3.63
South Carolina.....	410,000	477,780	17	4.19
South Dakota.....	149,000	160,625	8	3.73
Tennessee.....	686,000	808,145	18	3.83
Texas.....	1,580,000	1,978,950	25	3.60
Utah.....	130,000	169,925	31	3.83
Vermont.....	84,000	90,100	7	3.77
Virginia.....	593,000	785,060	32	3.85
Washington.....	451,000	625,185	39	3.36
West Virginia.....	434,000	479,265	10	3.95
Wisconsin.....	758,000	867,990	15	3.64
Wyoming.....	60,000	72,235	20	3.57
United States.....	32,166,000	38,310,980	19	3.60

## Portraits and Designs of U. S. Paper Currency

Denomi- nation	Portrait	Design on back	Denomi- nation	Portrait	Design on back
\$1	Washington	ONE between obverse and re- verse of Great Seal of U. S.	\$100	Franklin	Independence Hall.
\$2	Jefferson	Monticello.	\$500	McKinley	Ornate FIVE HUNDRED across.
\$5	Lincoln	Lincoln Memorial.	\$1,000	Cleveland	Ornate ONE THOUSAND across.
\$10	Hamilton	U. S. Treasury Building.	\$5,000	Madison	Ornate FIVE THOUSAND across.
\$20	Jackson	White House.	\$10,000	Chase	Ornate TEN THOUSAND across.
\$50	Grant	U. S. Capitol.	\$100,000*	Wilson	100,000 superimposed over dol- lar sign.

\* For use only in transactions between Federal Reserve System and Treasury Department.

## MORTALITY

## Death Rates in the United States, 1900-1955

Source: U. S. Public Health Service.

Year	Rate <sup>1</sup>	Year	Rate <sup>1</sup>	Year	Number of deaths	Rate <sup>1</sup>
1900.....	17.2	1919.....	12.9	1938.....	1,381,391	10.6
1901.....	16.4	1920.....	13.0	1939.....	1,387,897	10.6
1902.....	15.5	1921.....	11.5	1940.....	1,417,269	10.8
1903.....	15.6	1922.....	11.7	1941.....	1,397,642	10.5
1904.....	16.4	1923.....	12.1	1942.....	1,385,187	10.3
1905.....	15.9	1924.....	11.6	1943.....	1,459,544	10.9
1906.....	15.7	1925.....	11.7	1944.....	1,411,338	10.6
1907.....	15.9	1926.....	12.1	1945.....	1,401,719	10.6
1908.....	14.7	1927.....	11.3	1946.....	1,395,617	10.0
1909.....	14.2	1928.....	12.0	1947.....	1,445,370	10.1
1910.....	14.7	1929.....	11.9	1948.....	1,444,337	9.9
1911.....	13.9	1930.....	11.3	1949.....	1,443,607	9.7
1912.....	13.6	1931.....	11.1	1950.....	1,452,454	9.6
1913.....	13.8	1932.....	10.9	1951.....	1,482,099	9.7
1914.....	13.3	1933.....	10.7	1952.....	1,496,838	9.6
1915.....	13.2	1934.....	11.1	1953.....	1,517,541	9.6
1916.....	13.8	1935.....	10.9	1954.....	1,481,091	9.2
1917.....	14.0	1936.....	11.6	1955 <sup>2</sup> .....	1,527,000	9.3
1918.....	18.1	1937.....	11.3			

<sup>1</sup> Rates are per 1,000 population as of July 1 for each year except 1940 and 1950 which are as of April 1, the census date. Rates are based on population excluding armed forces overseas. Fetal deaths are excluded. Data relate to the total United States only from 1933; for earlier years, the death rates relate to Death Registration States. <sup>2</sup> Provisional.

## Death Rates\* by Age and Sex; U. S., 1900-1955

Source: U. S. Public Health Service.

Age group, years	1900	1920	1940	1950	1955	1900	1920	1940	1950	1955
	White Males					White Females				
Under 1.....	175.9	98.1	56.7	34.0	29.7	142.6	76.1	43.6	25.7	22.5
1-4.....	20.2	9.8	2.8	1.4	.8	18.7	9.0	2.4	1.1	.6
5-14.....	3.8	2.7	1.1	.7		3.8	2.3	.8	.5	
15-24.....	5.8	4.2	2.0	1.5	1.6	5.6	4.3	1.4	.7	.6
25-34.....	8.1	5.9	2.8	1.9	1.7	8.1	6.5	2.2	1.1	.9
35-44.....	10.6	7.7	5.1	3.8	3.4	9.6	7.3	3.7	2.4	2.0
45-54.....	15.5	12.0	11.4	9.8	9.0	14.0	10.9	7.5	5.5	4.6
55-64.....	28.5	24.2	25.2	23.0	22.2	25.5	21.7	16.8	12.9	11.2
65-74.....	59.1	54.2	54.0	48.6	47.7	53.4	49.9	41.5	32.4	30.1
75-84.....	128.2	122.5	122.0	105.3	102.6	118.9	116.4	104.8	84.8	80.1
	Nonwhite Males					Nonwhite Females				
Under 1.....	369.3	167.7	101.2	59.9	59.1	299.5	131.1	77.4	47.5	45.7
1-4.....	43.4	15.0	5.3	2.7	1.2	43.5	14.2	4.4	2.3	.9
5-14.....	7.8	3.7	1.6	1.0		10.1	3.9	1.4	.7	
15-24.....	11.8	9.9	5.0	2.9	2.2	11.2	10.8	5.0	2.2	1.3
25-34.....	12.5	12.2	8.5	5.0	3.9	11.7	13.5	7.4	3.9	3.0
35-44.....	14.2	14.4	13.2	8.6	7.6	15.6	16.0	11.7	7.5	6.0
45-54.....	24.7	20.1	24.5	18.6	15.7	23.9	23.4	21.1	15.5	12.5
55-64.....	42.1	31.1	37.1	34.8	30.7	42.1	35.8	33.2	27.6	23.6
65-74.....	71.6	60.2	62.8	57.9	58.7	66.4	60.4	52.3	46.1	46.4
75-84.....	131.4	116.0	108.8	90.3	82.0	113.2	106.4	84.1	70.6	65.3

\* Rates per 1,000 population of specified age, sex and race; 1955 is estimated.

## Deaths and Infant Deaths in Each State Reporting, 1954-55

Source: U. S. Public Health Service.

State	DEATHS (ALL AGES)						INFANT DEATHS (UNDER 1 YEAR)					
	Number			Rate			Number			Rate		
	1954	1955	Percent change	1954	1955	Percent change	1954	1955	Percent change	1954	1955	Percent change
Alabama.....	26,096	26,377	+1.1	8.7	8.7	0	2,734	2,633	-3.7	33.2	32.2	-3.0
Arizona.....	7,627	7,961	+4.4	8.2	8.1	-1.2	1,073	978	-8.9	39.1	34.7	-11.3
Arkansas.....	15,094	14,995	-0.7	8.4	8.4	0	1,120	1,011	-9.7	25.9	24.0	-7.3
California.....	107,655	113,847	+5.8	8.6	8.7	+1.2	7,073	7,572	+7.1	23.5	24.4	+3.8
Colorado.....	13,373	13,688	+2.4	8.9	8.8	-1.1	1,256	1,192	-5.1	31.5	29.1	-7.6
Connecticut.....	20,274	21,539	+6.2	9.3	9.6	+3.2	1,090	1,111	+1.9	22.1	21.7	-1.8
Delaware.....	3,661	3,854	+5.3	9.9	10.0	+1.0	283	250	-11.7	28.4	24.5	-13.7
D. C.....	8,735	9,156	+4.8	10.3	10.7	+3.9	789	858	+8.7	25.2	27.5	+9.1
Florida.....	33,130	34,872	+5.3	10.0	10.1	+1.0	2,682	2,587	-3.5	31.6	29.0	-8.2
Georgia.....	31,270	30,879	-1.3	8.7	8.5	-2.3	3,269	2,969	-9.2	31.5	29.4	-6.7
Idaho.....	4,773	4,838	+1.4	8.0	7.9	-1.2	374	342	-8.6	22.3	20.5	-8.1
Illinois.....	91,044	93,993	+3.2	9.9	10.0	+1.0	5,096	5,395	+5.9	23.9	25.0	+4.6
Indiana.....	39,726	41,503	+4.5	9.4	9.6	+2.1	2,711	2,652	-2.2	25.0	24.6	-1.6
Iowa.....	25,709	26,917	+4.7	9.6	10.0	+4.2	1,323	1,368	+3.4	20.8	21.2	+1.9
Kansas.....	19,344	18,969	-1.9	9.6	9.2	-4.2	1,297	1,215	-6.3	25.2	23.8	-5.6
Kentucky.....	26,469	27,250	+3.0	8.9	9.1	+2.2	2,292	2,202	-3.9	30.1	29.3	-2.7
Louisiana.....	24,595	24,227	-1.5	8.5	8.3	-2.4	2,609	2,695	+3.3	30.7	31.8	+3.6
Maine.....	9,907	10,077	+1.7	11.1	11.1	0	523	493	-5.7	23.9	22.7	-5.0
Maryland.....	23,247	24,323	+4.6	8.9	9.1	+2.2	1,776	1,821	+2.5	28.4	28.7	+1.1
Massachusetts.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Michigan.....	60,303	62,992	+4.5	8.6	8.7	+1.2	4,771	4,842	+1.5	25.0	24.9	-0.4
Minnesota.....	28,328	29,025	+2.5	9.0	9.1	+1.1	1,824	1,789	-1.9	22.8	22.3	-2.2
Mississippi.....	19,408	19,424	+0.1	9.1	9.2	+1.1	2,355	2,281	-3.1	34.5	34.3	-0.6
Missouri.....	43,942	44,468	+1.2	10.8	10.8	0	2,485	2,526	+1.6	25.7	26.1	+1.6
Montana.....	6,039	6,192	+2.5	9.8	9.8	0	385	427	+10.9	22.6	24.8	+9.7
Nebraska.....	12,838	13,172	+2.6	9.4	9.5	+1.1	727	753	+3.6	21.7	22.3	+2.8
Nevada.....	2,022	2,175	+7.6	9.6	9.7	+1.0	146	190	+30.1	25.4	30.6	+20.5
New Hampshire.....	6,268	6,588	+5.1	11.4	11.8	+3.5	278	309	+11.2	23.0	25.0	+8.7
New Jersey.....	50,375	52,945	+5.1	9.5	9.8	+3.2	2,661	2,813	+5.7	23.5	24.2	+3.0
New Mexico.....	5,534	5,696	+2.9	7.1	7.2	+1.4	1,074	1,123	+4.6	42.5	43.3	+1.9
New York.....	159,541	165,549	+3.8	10.1	10.3	+2.0	7,930	8,360	+5.4	23.4	24.3	+3.8
North Carolina.....	32,108	32,564	+1.4	7.6	7.6	0	3,513	3,529	+0.5	30.3	30.5	+0.7
North Dakota.....	5,014	5,198	+3.7	7.9	8.1	+2.5	436	446	+2.3	25.5	25.5	0
Ohio.....	82,265	84,115	+2.2	9.4	9.4	0	5,268	5,421	+2.9	23.8	24.5	+2.9
Oklahoma.....	19,703	19,288	-2.1	9.1	8.9	-2.2	1,359	1,307	-3.8	26.1	25.6	-1.9
Oregon.....	14,767	15,266	+3.4	9.0	9.1	+1.1	861	927	+7.7	22.6	24.2	+7.1
Pennsylvania.....	107,943	112,912	+4.6	9.8	10.1	+3.1	6,004	5,985	-0.3	24.6	25.1	+2.0
Rhode Island.....	8,229	8,578	+4.2	9.8	10.2	+4.1	406	397	-2.2	21.0	20.7	+1.4
South Carolina.....	17,604	17,795	+1.1	7.8	7.8	0	2,086	2,110	+1.2	31.9	33.6	+5.3
South Dakota.....	5,748	5,918	+3.0	8.6	8.7	+1.2	438	474	+8.2	24.5	25.2	+2.9
Tennessee.....	29,674	30,400	+2.4	8.8	8.9	+1.1	2,781	2,636	-5.2	32.0	30.4	-5.0
Texas.....	66,231	65,048	-1.8	7.8	7.6	-2.6	7,538	7,149	-5.2	31.1	30.1	-3.2
Utah.....	5,292	5,383	+1.7	6.9	6.9	0	506	510	+0.8	20.3	20.3	0
Vermont.....	3,952	4,264	+7.9	10.5	11.3	+7.6	215	240	+11.6	23.8	25.6	+7.6
Virginia.....	29,065	30,038	+3.3	8.2	8.4	+2.4	2,843	2,740	-3.6	31.3	30.5	-2.6
Washington.....	23,441	24,557	+4.8	9.3	9.6	+3.2	1,534	1,528	-0.4	23.0	23.6	+2.6
West Virginia.....	16,325	16,807	+3.0	8.2	8.4	+2.4	1,340	1,215	-9.3	28.2	26.8	-5.0
Wisconsin.....	33,697	35,235	+4.6	9.3	9.5	+2.2	2,028	2,161	+6.6	22.3	23.5	+5.4
Wyoming.....	2,430	2,536	+4.4	8.2	8.3	+1.2	262	241	-8.0	29.8	28.5	-4.4

<sup>1</sup> Revised figure supplied by State office. NOTE: Rates for deaths at all ages are per 1,000 estimated midyear population in each specified area; infant mortality rates are deaths under one year per 1,000 live births in each specified area. Data are by place of occurrence, exclusive of fetal deaths and of deaths among armed forces overseas. Data are provisional. Leaders (...) indicate data not available.



## Average of Annual Death Rates for Selected Causes; U. S., 1900-1955

Source: U. S. Public Health Service.

Cause of death	Death rates per 100,000 in						
	5th revision					Sixth revision	
	1900-04	1920-24	1940-44	1945-49	1950	1950	1955 est.
Typhoid fever.....	26.8	7.4	.7	.2	.1	.1	§
Communicable diseases of child- hood.....	65.3	34.0	4.6	2.3	1.3	1.5	§
Measles.....	10.0	7.2	1.1	.5	.3	.3	.2
Scarlet fever.....	11.8	4.0	.3	.1	†	.2	.1
Whooping cough.....	10.7	9.0	2.2	1.0	.7	.7	.3
Diphtheria.....	32.8	13.8	1.0	.7	.3	.3	.1
Diarrhea and enteritis.....	115.6	43.2	9.8	6.5	5.0	5.1	§
Pneumonia and influenza.....	184.4	141.1	63.8	42.5	35.1	31.3	27.5
Influenza.....	22.9	35.2	13.1	5.1	3.5	4.4	1.7
Pneumonia.....	161.5	105.9	50.7	37.4	31.6	26.9	25.8
Tuberculosis.....	184.8	97.1	43.5	33.5	23.4	22.5	9.5
Cancer.....	67.6	86.8	123.2	133.8	138.4	139.8	147.6
Diabetes mellitus.....	12.2	17.0	26.2	26.8	28.4	16.2	15.2
Cardiovascular-renal diseases.....	338.2	340.9	466.1	465.5	465.0	510.8	503.3
Diseases of the heart.....	147.7	166.1	302.2	318.6	326.1	355.5	352.0
Cerebral hemorrhage.....	106.3	93.4	91.8	91.5	92.0	104.0	106.6
Chronic nephritis.....	84.2	81.4	72.1	55.3	46.9	16.4	10.2
Syphilis.....	12.9	17.5	12.7	8.9	6.8	5.0	2.3
Appendicitis.....	9.3	14.0	7.3	3.5	2.2	2.0	1.4
Accidents, all forms.....	79.1	71.6	73.4	68.4	63.8	60.6	55.6
Motor vehicle accidents.....	—	12.8	22.7	22.3	23.1	23.1	22.9
Infant mortality*.....	—	77.1	42.6	33.5	29.2	29.2	26.5
Neonatal mortality*.....	—	39.8	26.3	22.9	20.5	20.5	§
Fetal mortality*.....	—	39.2†	28.6	24.5	22.9	22.9	§
Maternal mortality*.....	—	6.9	2.9	1.4	.8	.8	.5
All causes.....	1622.3	1198.0	1062.8	1005.4	963.8	963.8	929.5

\* Rates per 1,000 live births. † Less than .05. †† 1922-24. § Not available. NOTE: Rates per 100,000 population. The figures beginning with 1940 relate to the total United States; for earlier periods the figures relate to the Death Registration States. The death rates for 1950 are shown on the basis of both the Fifth and the Sixth Revisions of the International List of Causes of Death. Because of radical changes from the Fifth to the Sixth Revisions, the death rates are not strictly comparable. Death rates for 1955 are based upon the Sixth Revision; 1955 figures are estimates.

## Death Rates by Marital Status, Age, and Sex; U. S., Annual Average for 1949-51

Source: D. Shurtleff, "Mortality and Marital Status," Public Health Reports, March 1955.

Age (in years)	Male					Female				
	Single	Married	Widowed	Divorced	Total <sup>1</sup>	Single	Married	Widowed	Divorced	Total <sup>1</sup>
Under 20 <sup>2</sup> .....	3.4	1.6	2.0	2.3	3.4	2.6	1.0	4.8	1.6	2.5
20-24.....	2.2	1.5	5.7	3.4	1.9	1.2	.9	3.4	1.7	1.0
25-34.....	3.6	1.7	8.6	5.8	2.2	2.2	1.2	4.1	2.6	1.4
35-44.....	8.5	3.6	12.1	11.8	4.3	3.9	2.6	6.2	4.5	2.9
45-54.....	17.8	9.3	21.6	23.2	10.7	7.0	5.7	10.3	8.1	6.5
55-59.....	30.0	17.8	30.4	36.5	20.0	11.5	10.2	14.8	13.8	11.4
60-64.....	41.0	25.8	39.5	48.6	29.0	16.6	15.7	20.7	21.1	17.5
65-69.....	55.0	36.5	50.0	66.1	41.1	24.8	23.5	28.1	33.1	26.0
70-74.....	78.8	54.3	69.1	91.9	60.4	42.3	39.0	44.8	58.2	43.2
75 and over....	137.3	100.3	139.0	173.3	119.4	103.6	76.0	106.2	129.2	101.6
All ages <sup>2</sup> ....	5.4	12.1	70.5	26.1	11.1	3.9	5.8	41.1	8.8	8.3

<sup>1</sup> Includes deaths for which marital status was not stated. <sup>2</sup> Includes deaths for which age was not stated. <sup>3</sup> Rates for "Total" and "Single" are based on deaths and population at ages 0-19 years. Rates for "Married," "Widowed," and "Divorced" are based on deaths and population at ages 15-19 years. NOTE: Rates are per 1,000 population in each specified group enumerated in the Census of April 1, 1950. Deaths among armed forces overseas are excluded.

# Crude Death Rate for Selected Countries, 1938, 1948, 1953, 1955

Source: Statistical Office of the United Nations.

Country	Rate <sup>1</sup>				Country	Rate <sup>1</sup>			
	1938	1948	1953	1955		1938	1948	1953	1955
<b>North America</b>					<b>Europe (cont.)</b>				
Canada <sup>2</sup> .....	9.7	9.3	8.6	8.1	Hungary.....	14.3	11.2	*	*
Costa Rica.....	17.7	13.2	11.7	10.5	Ireland.....	13.6	12.2	11.7	12.6
El Salvador.....	19.1	16.9	14.7	13.9	Italy.....	14.1	10.7	10.0	9.2
Mexico.....	22.9	16.7	15.9	13.3	Luxemburg.....	12.7	11.8	12.5	11.4
Nicaragua.....	12.0	14.4	10.2	*	Netherlands.....	8.5	7.4	7.7	7.6
Panamá <sup>3</sup> .....	14.2	10.2	9.4	9.3	Norway.....	9.9	8.9	8.5	8.3
Puerto Rico.....	18.7	12.0	8.1	7.1	Portugal.....	15.4	13.0	11.3	11.3
United States.....	10.6	9.9	9.6	9.3	Rumania.....	19.2	*	*	*
<b>South America</b>					Spain.....	19.3	11.1	9.7	9.3
Chile.....	23.5	16.7	12.4	12.8	Sweden.....	11.5	9.8	9.7	9.4
Peru <sup>4</sup> .....	16.2	11.7	11.8	*	Switzerland.....	11.6	10.8	10.2	10.1
Venezuela.....	18.3	12.8	9.9	10.2	United Kingdom.....	11.8	10.9	11.4	11.7
<b>Europe</b>					<b>Asia</b>				
Austria.....	14.0	12.1	12.0	12.1	Ceylon.....	21.0	13.2	10.9	11.0
Belgium.....	13.2	12.6	12.1	12.6	India <sup>5</sup> .....	23.7	17.0	15.0	12.7
Bulgaria.....	13.7	*	*	*	Israel <sup>6</sup> .....	8.1	6.7	6.3	5.8
Czechoslovakia.....	13.2	11.5	10.5	9.6	Japan <sup>7</sup> .....	17.7	12.0	8.9	7.8
Denmark.....	10.3	8.6	9.0	8.8	<b>Other</b>				
Finland <sup>8</sup> .....	12.8	11.2	9.6	9.3	Australia <sup>9</sup> .....	9.6	10.0	9.1	8.9
France.....	15.8	12.5	13.0	12.0	New Zealand <sup>10</sup> .....	9.7	9.2	8.8	9.0
Germany, West.....	11.4	10.3	11.0	10.8	U. of So. Africa <sup>11</sup> .....	9.5	8.9	8.9	8.6

<sup>1</sup> Number of deaths per 1,000 population. <sup>2</sup> Excluding Yukon and Northwest Territories. <sup>3</sup> Excluding tribal Indians. <sup>4</sup> Excluding Indian jungle population. <sup>5</sup> Prior to 1951, data relate to Finnish Nationals in Finland. <sup>6</sup> Registration area only. <sup>7</sup> Jewish population only. <sup>8</sup> Japanese nationals in Japan only. <sup>9</sup> Excludes full-blooded aborigines. <sup>10</sup> Excluding Maoris. <sup>11</sup> White population only (about 20% of total). <sup>12</sup> Including Amami Islands. \* Not available.

## Transportation-Accident Death Rates, 1953-55

Source: National Safety Council.

Kind of transportation	Passenger miles	Passenger deaths			All deaths, 1955 <sup>a</sup>
		Deaths, 1955	Rates <sup>1</sup>		
			1955	1953-55 <sup>2</sup>	
Passenger automobiles, taxis <sup>4</sup> .....	900,000,000,000	24,700	2.7	2.8	33,700
Busses.....	52,000,000,000	100	0.19	0.17	550
Railroad passenger trains.....	28,550,000,000	19	0.07	0.10	1,065
Scheduled air transport planes.....	20,550,000,000	156	0.76	0.48	181

<sup>1</sup> Per 100,000,000 miles. <sup>2</sup> Average death rate. <sup>3</sup> All persons—pedestrians, trespassers, etc., as well as passengers—killed in operation of vehicles are included. <sup>4</sup> Drivers of passenger automobiles are considered passengers.

## One Accidental Death Every 6 Minutes in 1955

Source: National Safety Council.

The nation's 1955 accident totals can be figured at the following approximate rates:

Class of accident	One every	Class of accident	One every
All accidents	Deaths 6 minutes	Workers off-job	Deaths 17 minutes
	Injuries 3 seconds		Injuries 13 seconds
Motor-vehicle	Deaths 13 minutes	Home	Deaths 19 minutes
	Injuries 23 seconds		Injuries 8 seconds
Work	Deaths 37 minutes	Public non-motor-vehicle	Deaths 33 minutes
	Injuries 17 seconds		Injuries 16 seconds

## Motor-Vehicle Deaths by Type of Accident, 1913 to 1954

Source: National Safety Council.

Year	Deaths from collisions with—						Deaths from non-collision accidents*	Total deaths†
	Pedestrians	Other motor vehicles	Rail-road trains	Street cars	Bi-cycles	Animal-drawn vehicle or animal	Fixed objects*	
1913.....	.....	.....	.....	.....	.....	.....	.....	4,200
1918.....	.....	.....	.....	.....	.....	.....	.....	10,700
1923.....	.....	.....	.....	.....	950	.....	.....	18,400
1928.....	11,420	4,310	2,140	570	.....	.....	540	28,000
1933.....	12,840	6,470	1,437	318	400	310	900	31,363
1938.....	12,850	8,900	1,490	165	720	170	940	32,582
1943.....	9,900	5,300	1,448	171	450	160	700	23,823
1948.....	9,950	10,200	1,474	83	500	100	1,000	32,259
1950.....	9,100	11,250	1,541	89	450	110	1,300	34,763
1952.....	8,600	12,900	1,429	32	400	100	1,500	37,794
1953.....	8,700	12,600	1,506	26	450	100	1,500	37,955
1954.....	8,000	11,750	1,269	28	400	80	1,500	35,586
1955.....	8,200	13,000	1,398	20	480	100	1,600	38,300

\* The proportion of deaths allocated to fixed-object collisions and noncollision accidents is different from that reported by most states. State reports generally indicate that many accidents involving no collision on the roadway are classified as fixed-object collisions because the motor vehicle collides with an object after leaving the roadway.

† The totals do not quite equal the sum of the various types because the estimates were generally made only to the nearest 10 deaths, and to the nearest 50 deaths for certain types.

## Motor-Vehicle Traffic Deaths by States, 1954-55

Source: National Safety Council.

State	1954	Rate <sup>1</sup>	1955	Rate <sup>1</sup>	State	1954	Rate <sup>1</sup>	1955	Rate <sup>1</sup>
Alabama.....	775	8.6	844	8.6	Nebraska.....	328	5.4	318	5.2
Arizona.....	403	10.2	358	8.1	Nevada.....	146	10.2	173	11.1
Arkansas.....	412	7.3	416	6.9	New Hampshire.....	88	4.4	106	5.0
California.....	3,104	6.1	3,431	6.2	New Jersey.....	807	4.0	791	3.6
Colorado.....	388	6.4	429	6.7	New Mexico.....	371	10.3	361	9.1
Connecticut.....	242	3.1	320	3.8	New York.....	2,046	5.3	2,185	5.3
Delaware.....	94	6.3	110	6.6	North Carolina.....	991	7.1	1,165	7.7
D. C.....	56	2.2	72	2.8	North Dakota.....	150	7.2	144	5.8
Florida.....	978	7.2	981	6.5	Ohio.....	1,883	5.9	2,074	6.0
Georgia.....	973	8.0	1,083	8.2	Oklahoma.....	579	6.5	595	6.3
Idaho.....	245	9.2	186	6.6	Oregon.....	422	6.3	414	5.8
Illinois.....	2,059	7.0	2,195	7.0	Pennsylvania.....	1,552	4.8	1,727	5.0
Indiana.....	1,077	6.2	1,146	6.0	Rhode Island.....	63	2.4	87	3.0
Iowa.....	612	5.9	608	5.5	South Carolina.....	564	8.0	713	9.4
Kansas.....	611	7.3	592	6.7	South Dakota.....	189	6.6	197	6.4
Kentucky.....	758	8.8	862	9.3	Tennessee.....	940	7.0	905	7.9
Louisiana.....	632	7.6	681	7.5	Texas.....	2,431	6.6	2,547	6.4
Maine.....	148	4.4	164	4.6	Utah.....	209	7.3	203	6.6
Maryland.....	522	6.2	519	5.7	Vermont.....	62	4.5	90	6.2
Massachusetts.....	516	3.7	569	3.8	Virginia.....	810	6.7	879	6.6
Michigan.....	1,793	6.9	2,004	7.1	Washington.....	413	4.4	465	4.6
Minnesota.....	643	5.7	577	4.8	West Virginia.....	350	6.7	368	6.6
Mississippi.....	446	7.0	547	8.1	Wisconsin.....	843	6.7	932	7.0
Missouri.....	974	5.9	1,070	6.1	Wyoming.....	148	7.7	143	7.2
Montana.....	220	7.9	236	8.0	TOTAL U. S.....	35,586	6.3	38,300	6.4

<sup>1</sup> Number of deaths per 100,000,000 vehicle-miles. <sup>2</sup> From state health authorities. <sup>3</sup> Totals are not sums of state figures. NOTE: Figures are per state traffic authorities and indicate place of accident rather than of death.



## Average Annual Accidental Death Rates, 1949-1950

(Rates are per 100,000 Population)

Source: Statistical Bulletin of the Metropolitan Life Insurance Company. Compiled from various reports by the National Office of Vital Statistics.

State	Accidents, total	Motor vehicles	Falls	Burns and confla- grations	Drown- ings	Fire- arms	Ma- chinery	Absorp- tion of poison- ous gas	Poison- ing by solids and liquids	Water trans- port
Alabama.....	62.4	25.9	7.2	6.6	2.9	2.7	1.2	0.4	1.4	2.0
Arizona.....	80.9	36.1	8.3	5.5	5.7	3.7	0.8	1.0	1.3	0.5
Arkansas.....	62.2	20.6	10.0	7.8	3.6	2.1	1.7	6.4	1.3	1.4
California.....	62.2	30.0	9.7	3.8	3.2	1.2	0.9	1.1	1.7	1.0
Colorado.....	71.3	27.8	14.7	3.9	4.6	2.3	1.6	1.2	1.1	0.7
Connecticut.....	44.8	12.9	15.4	3.2	3.0	0.3	0.4	2.1	1.1	0.6
Delaware.....	61.9	24.5	14.0	7.1	4.1	1.7	0.8	0.8	1.1	1.1
D. C.....	56.2	15.9	17.4	4.9	3.4	0.4	0.5	0.7	1.2	1.1
Florida.....	66.1	27.5	9.8	4.4	5.9	2.0	0.6	0.9	1.3	2.3
Georgia.....	59.8	24.0	8.9	6.4	2.9	2.8	1.1	0.4	1.7	1.2
Idaho.....	83.9	33.7	11.0	4.6	6.5	3.6	3.3	0.5	1.0	1.3
Illinois.....	59.8	22.3	16.5	4.5	2.9	1.3	1.2	0.8	1.1	0.7
Indiana.....	68.4	27.9	18.1	4.4	2.8	1.2	1.6	0.9	1.0	0.6
Iowa.....	66.0	23.4	20.7	5.1	2.7	1.3	1.9	0.7	0.7	0.8
Kansas.....	71.7	27.2	17.4	5.5	3.3	1.7	2.5	1.4	0.9	0.5
Kentucky.....	68.4	24.8	13.8	6.5	3.3	2.5	1.3	0.6	1.1	1.2
Louisiana.....	59.7	19.9	8.8	6.4	4.8	2.3	1.4	0.4	1.2	2.9
Maine.....	62.1	17.3	16.5	6.6	4.6	2.0	1.0	1.2	1.0	2.9
Maryland.....	54.4	18.2	13.4	4.9	3.7	1.0	1.0	1.3	1.2	1.7
Massachusetts.....	51.5	11.3	23.2	3.0	2.8	0.4	0.6	2.0	1.2	0.6
Michigan.....	61.1	26.0	15.2	4.8	3.1	1.0	1.1	0.9	0.8	1.2
Minnesota.....	60.3	19.8	17.1	4.3	3.8	1.3	1.7	0.9	0.9	1.4
Mississippi.....	61.5	22.4	6.3	9.2	4.8	2.8	1.6	0.2	1.4	1.2
Missouri.....	67.7	22.8	19.9	6.4	2.9	2.0	1.4	0.7	1.0	0.9
Montana.....	96.7	29.7	18.4	7.2	5.7	3.9	3.1	2.6	1.5	1.1
Nebraska.....	67.4	22.1	18.9	4.0	3.3	1.9	2.8	0.9	0.7	0.3
Nevada.....	108.1	46.7	9.8	8.2	5.3	4.4	2.8	1.3	1.6	0.6
New Hampshire.....	56.5	16.3	17.4	6.0	3.9	1.7	1.4	0.9	0.8	1.6
New Jersey.....	42.6	13.3	13.4	2.9	2.9	0.5	0.5	2.2	0.8	0.8
New Mexico.....	82.3	37.0	7.3	7.2	4.7	3.4	2.3	1.7	1.2	0.3
New York.....	50.2	14.1	18.6	3.2	3.1	0.5	0.6	2.3	0.7	0.8
North Carolina.....	57.6	25.6	6.8	5.3	2.9	1.8	1.0	0.3	1.7	1.4
North Dakota.....	68.3	21.5	15.1	4.4	4.3	3.1	3.0	1.2	1.3	0.7
Ohio.....	61.7	23.1	18.5	4.1	2.5	1.0	1.0	1.2	1.0	0.7
Oklahoma.....	66.5	24.4	13.7	6.4	3.2	2.7	1.8	1.2	1.0	0.7
Oregon.....	77.5	28.4	12.6	4.4	5.5	2.7	2.9	1.3	0.9	2.5
Pennsylvania.....	54.2	16.6	17.3	3.8	2.5	0.9	1.0	1.3	0.9	0.4
Rhode Island.....	48.4	10.6	23.0	2.0	3.6	0.4	0.7	1.9	0.9	0.2
South Carolina.....	65.0	28.0	7.1	7.6	3.7	2.7	0.8	0.5	1.5	1.8
South Dakota.....	72.3	27.6	14.6	4.9	3.4	2.2	3.3	1.1	1.1	1.3
Tennessee.....	55.1	22.6	9.6	5.8	2.4	1.9	0.8	0.3	1.0	1.3
Texas.....	69.4	29.1	10.2	6.2	5.2	2.6	1.4	0.6	1.2	0.7
Utah.....	70.8	27.8	13.1	3.6	4.1	2.9	2.4	0.4	0.6	0.4
Vermont.....	64.5	19.5	16.3	4.6	5.7	3.3	1.6	0.8	1.2	1.5
Virginia.....	61.5	23.8	9.4	6.4	3.6	2.3	0.8	1.0	1.8	1.4
Washington.....	70.8	21.7	14.2	4.8	5.5	1.9	1.9	2.3	1.1	2.1
West Virginia.....	69.9	20.7	12.7	5.9	4.5	2.9	1.4	1.3	1.1	0.7
Wisconsin.....	60.5	22.8	16.8	3.5	3.1	1.2	1.7	1.3	0.6	1.2
Wyoming.....	103.4	42.5	11.2	5.5	5.9	3.9	3.0	3.0	1.4	0.7
United States.....	60.7	22.2	14.4	4.8	3.4	1.5	1.2	1.2	1.1	1.0

## Hospital Facilities in the U. S., 1955

*Source: American Hospital Association.*

State	Total—all hospitals			State	Total—all hospitals		
	No. of hospitals	No. of beds	Admissions		No. of hospitals	No. of beds	Admissions
Alabama.....	126	22,130	342,843	Nebraska.....	114	14,267	199,946
Arizona.....	71	7,979	145,765	Nevada.....	17	1,626	35,494
Arkansas.....	86	14,692	193,574	New Hampshire....	41	6,677	81,295
California.....	424	118,365	1,562,118	New Jersey.....	159	56,728	591,374
Colorado.....	101	18,704	253,659	New Mexico.....	54	5,625	111,058
Connecticut.....	72	24,305	299,104	New York.....	497	229,327	2,007,147
Delaware.....	16	4,770	47,502	North Carolina....	181	32,721	562,116
D. C.....	28	14,323	169,408	North Dakota.....	52	6,481	103,050
Florida.....	154	25,674	448,922	Ohio.....	260	77,849	1,091,106
Georgia.....	151	28,184	437,892	Oklahoma.....	126	19,075	256,077
Idaho.....	52	3,914	87,011	Oregon.....	80	12,837	216,734
Illinois.....	357	107,045	1,230,217	Pennsylvania.....	346	115,568	1,355,005
Indiana.....	142	32,467	492,361	Rhode Island.....	23	9,801	94,770
Iowa.....	128	22,594	334,046	South Carolina....	77	17,022	261,938
Kansas.....	155	18,968	295,568	South Dakota.....	67	7,380	107,083
Kentucky.....	127	23,416	358,368	Tennessee.....	153	26,919	424,726
Louisiana.....	132	23,271	426,574	Texas.....	559	61,763	1,200,956
Maine.....	56	9,208	101,488	Utah.....	39	5,512	91,395
Maryland.....	84	30,068	301,814	Vermont.....	28	4,611	55,359
Massachusetts.....	211	67,950	683,058	Virginia.....	125	30,280	438,678
Michigan.....	263	70,674	945,529	Washington.....	139	25,209	401,146
Minnesota.....	210	32,507	503,850	West Virginia.....	90	15,517	279,021
Mississippi.....	108	14,205	249,545	Wisconsin.....	221	37,523	534,016
Missouri.....	156	38,620	488,634	Wyoming.....	35	3,922	59,494
Montana.....	63	6,135	113,787	Total.....	6,956	1,604,408	21,072,521

## EXPECTATION OF LIFE

### Expectation of Life and Mortality Rates, 1954

*Source: Metropolitan Life Insurance Co. from abridged life tables prepared by U. S. Public Health Service.*

Age, years	Expectation of life in years					Mortality rate per 1,000				
	Total persons	White Male	White Female	Nonwhite Male	Nonwhite Female	Total persons	White Male	White Female	Nonwhite Male	Nonwhite Female
0.....	69.6	67.4	73.6	61.0	65.8	26.7	27.1	20.7	47.5	39.0
1.....	70.5	68.3	74.2	63.1	67.4	1.9	1.8	1.5	3.9	3.3
2.....	69.6	67.4	73.3	62.3	66.6	1.2	1.1	1.0	2.1	1.9
3.....	68.7	66.5	72.4	61.4	65.8	.9	.9	.7	1.4	1.2
4.....	67.8	65.6	71.4	60.5	64.8	.7	.7	.6	1.1	1.0
5.....	66.8	64.6	70.5	59.6	63.9	.7	.7	.5	1.0	.8
6.....	65.9	63.7	69.5	58.7	63.0	.6	.6	.4	.8	.7
7.....	64.9	62.7	68.5	57.7	62.0	.5	.5	.4	.7	.6
8.....	63.9	61.7	67.6	56.8	61.0	.4	.5	.4	.6	.5
9.....	62.9	60.8	66.6	55.8	60.1	.4	.5	.3	.6	.4
10.....	62.0	59.8	65.6	54.8	59.1	.4	.4	.3	.6	.4
11.....	61.0	58.8	64.6	53.9	58.1	.4	.5	.3	.7	.4
12.....	60.0	57.8	63.6	52.9	57.1	.5	.6	.3	.8	.5
13.....	59.0	56.9	62.7	51.9	56.2	.5	.7	.3	1.0	.6
14.....	58.1	55.9	61.7	51.0	55.2	.8	.8	.4	1.2	.7
15.....	57.1	55.0	60.7	50.0	54.2	.7	.9	.4	1.3	.8

## Expectation of Life and Mortality Rates (Contd.)

Age, years	Expectation of life in years					Mortality rate per 1,000				
	Total persons	White Male	White Female	Nonwhite Male	Nonwhite Female	Total persons	White Male	White Female	Nonwhite Male	Nonwhite Female
16.....	55.2	54.0	59.7	49.1	53.3	.9	1.1	.5	1.6	.9
17.....	55.2	53.1	58.8	48.2	52.3	.9	1.2	.5	1.8	1.0
18.....	54.3	52.1	57.8	47.3	51.4	1.0	1.4	.5	2.0	1.2
19.....	53.3	51.2	56.8	46.4	50.4	1.1	1.5	.6	2.3	1.3
20.....	52.4	50.3	55.9	45.5	49.5	1.2	1.7	.6	2.6	1.4
21.....	51.4	49.4	54.9	44.6	48.6	1.3	1.8	.6	2.8	1.6
22.....	50.5	48.5	53.9	43.7	47.6	1.3	1.9	.6	3.1	1.7
23.....	49.6	47.5	53.0	42.8	46.7	1.4	1.8	.7	3.3	1.8
24.....	48.6	46.6	52.0	42.0	45.8	1.4	1.8	.7	3.5	1.9
25.....	47.7	45.7	51.0	41.1	44.9	1.3	1.7	.7	3.7	2.0
26.....	46.8	44.8	50.1	40.3	44.0	1.4	1.6	.7	3.9	2.1
27.....	45.8	43.8	49.1	39.4	43.1	1.4	1.6	.8	4.0	2.3
28.....	44.9	42.9	48.1	38.6	42.2	1.4	1.6	.8	4.1	2.4
29.....	43.9	42.0	47.2	37.8	41.3	1.4	1.6	.8	4.1	2.7
30.....	43.0	41.1	46.2	36.9	40.4	1.5	1.6	.9	4.1	2.9
31.....	42.1	40.1	45.3	36.1	39.5	1.6	1.7	.9	4.2	3.2
32.....	41.1	39.2	44.3	35.2	38.6	1.7	1.8	1.0	4.3	3.5
33.....	40.2	38.3	43.3	34.4	37.8	1.8	1.9	1.1	4.7	3.8
34.....	39.3	37.3	42.4	33.5	36.9	1.9	2.0	1.2	5.1	4.1
35.....	38.4	36.4	41.4	32.7	36.1	2.1	2.2	1.3	5.6	4.5
36.....	37.4	35.5	40.5	31.9	35.2	2.2	2.4	1.5	6.0	4.9
37.....	36.5	34.6	39.6	31.1	34.4	2.4	2.6	1.6	6.5	5.2
38.....	35.6	33.7	38.6	30.3	33.6	2.6	2.8	1.7	6.9	5.5
39.....	34.7	32.8	37.7	29.5	32.8	2.9	3.1	1.9	7.2	5.8
40.....	33.8	31.8	36.7	28.7	31.9	3.1	3.4	2.0	7.6	6.1
41.....	32.9	31.0	35.8	27.9	31.1	3.4	3.7	2.2	8.1	6.4
42.....	32.0	30.1	34.9	27.1	30.3	3.7	4.1	2.4	8.6	6.8
43.....	31.1	29.2	34.0	26.3	29.5	4.1	4.6	2.7	9.2	7.4
44.....	30.3	28.3	33.1	25.6	28.8	4.5	5.2	2.9	10.0	8.1
45.....	29.4	27.5	32.2	24.8	28.0	5.0	5.8	3.2	10.7	8.7
46.....	28.5	26.6	31.3	24.1	27.2	5.5	6.4	3.5	11.5	9.5
47.....	27.7	25.8	30.4	23.4	26.5	6.0	7.1	3.8	12.6	10.4
48.....	26.8	25.0	29.5	22.7	25.8	6.6	7.9	4.2	13.9	11.5
49.....	26.0	24.2	28.6	22.0	25.0	7.3	8.7	4.6	15.6	12.9
50.....	25.2	23.4	27.7	21.3	24.4	8.1	9.5	5.0	17.4	14.4
51.....	24.4	22.6	26.9	20.7	23.7	8.9	10.5	5.5	19.2	15.9
52.....	23.6	21.8	26.0	20.1	23.1	9.7	11.4	6.0	20.8	17.1
53.....	22.9	21.1	25.2	19.5	22.5	10.4	12.4	6.4	22.0	17.8
54.....	22.1	20.3	24.3	18.9	21.9	11.1	13.5	6.9	23.1	18.2
55.....	21.3	19.6	23.5	18.4	21.3	11.8	14.6	7.4	24.0	18.5
56.....	20.6	18.9	22.7	17.8	20.7	12.7	15.8	8.0	25.1	19.0
57.....	19.8	18.2	21.9	17.2	20.1	13.7	17.1	8.7	26.5	19.7
58.....	19.1	17.5	21.0	16.7	19.5	14.9	18.7	9.5	28.3	20.9
59.....	18.4	16.8	20.2	16.2	18.9	16.3	20.5	10.5	30.5	22.4
60.....	17.7	16.2	19.4	15.7	18.3	17.8	22.4	11.5	32.8	24.0
61.....	17.0	15.5	18.7	15.2	17.7	19.3	24.4	12.7	35.1	25.6
62.....	16.3	14.9	17.9	14.7	17.2	21.1	26.6	14.1	37.7	27.7
63.....	15.7	14.3	17.1	14.3	16.7	23.2	29.0	15.7	40.5	30.5
64.....	15.0	13.7	16.4	13.9	16.2	25.4	31.6	17.5	43.6	33.8
65.....	14.4	13.1	15.7	13.5	15.7	28.0	34.5	19.6	47.1	*
66.....	13.8	12.6	15.0	13.1	*	30.6	37.4	21.8	50.7	*
67.....	13.2	12.1	14.3	12.8	*	33.1	40.4	24.0	53.7	*
68.....	12.7	11.5	13.7	12.5	*	35.4	43.1	26.1	55.9	*
69.....	12.1	11.0	13.0	12.2	*	37.6	45.8	28.3	57.2	*

\* Not computed because of deficiencies in basic data.



## Expectation of Life in the United States, 1850-1954

*Source:* Statistical Bulletin of the Metropolitan Life Insurance Company. Compiled from various publications of the National Office of Vital Statistics and the Bureau of the Census.

Calendar period	Age								
	0	10	20	30	40	50	60	70	80
<b>White Males</b>									
1850*	38.3	48.0	40.1	34.0	27.9	21.6	15.6	10.2	5.9
1890*	42.50	48.45	40.66	34.05	27.37	20.72	14.73	9.35	5.40
1900-1902†	48.23	50.59	42.19	34.88	27.74	20.76	14.35	9.03	5.10
1901-1910†	49.32	50.86	42.39	34.80	27.55	20.59	14.17	8.96	5.07
1909-1911†	50.23	51.32	42.71	34.87	27.43	20.39	13.98	8.83	5.09
1919-1921†	56.34	54.15	45.60	37.65	29.86	22.22	15.25	9.51	5.47
1920-1929†	57.85	54.65	45.84	37.51	29.35	21.65	14.75	9.17	5.26
1929-1931	59.12	54.96	46.02	37.54	29.22	21.51	14.72	9.20	5.26
1930-1939	60.62	55.86	46.77	38.06	29.57	21.71	14.86	9.29	5.30
1939-1941	62.81	57.03	47.76	38.80	30.03	21.96	15.05	9.42	5.38
1949-1951	66.31	58.98	49.52	40.29	31.17	22.83	15.76	10.07	5.88
1954	67.4	59.8	50.3	41.1	31.8	23.4	16.2	10.5	6.3
<b>White Females</b>									
1850*	40.5	47.2	40.2	35.4	29.8	23.5	17.0	11.3	6.4
1890*	44.46	49.62	42.03	35.36	28.76	22.09	15.70	10.15	5.75
1900-1902†	51.08	52.15	43.77	36.42	29.17	21.89	15.23	9.59	5.50
1901-1910†	52.54	52.89	44.39	36.75	29.28	21.86	15.09	9.52	5.43
1909-1911†	53.62	53.57	44.88	36.96	29.26	21.74	14.92	9.38	5.35
1919-1921†	58.53	55.17	46.46	38.72	30.94	23.12	15.93	9.94	5.70
1920-1929†	60.62	56.41	47.46	39.20	30.97	22.97	15.70	9.71	5.46
1929-1931	62.67	57.65	48.52	39.99	31.52	23.41	16.05	9.98	5.63
1930-1939	64.52	58.98	49.71	40.90	32.24	23.98	16.44	10.19	5.76
1939-1941	67.29	60.85	51.38	42.21	33.25	24.72	17.00	10.50	5.88
1949-1951	72.03	64.26	54.56	45.00	35.64	26.76	18.64	11.68	6.59
1954	73.6	65.6	55.9	46.2	36.7	27.7	19.4	12.4	7.0
<b>Nonwhite Males‡</b>									
1900-1902†	32.54	41.90	35.11	29.25	23.12	17.34	12.62	8.33	5.12
1901-1910†	32.57	40.73	33.78	27.97	22.23	16.64	11.87	8.29	5.43
1909-1911†	34.05	40.65	33.46	27.33	21.57	16.21	11.67	8.00	5.53
1919-1921†	47.14	45.99	38.36	32.51	26.53	20.47	14.74	9.58	5.83
1920-1929†	46.90	44.86	36.76	30.65	24.55	18.83	13.66	9.12	5.54
1929-1931	47.55	44.27	35.95	29.45	23.36	17.92	13.15	8.78	5.42
1930-1939	50.06	46.56	38.05	31.11	24.65	18.98	14.13	9.53	6.01
1939-1941	52.26	48.34	39.52	32.05	25.06	19.06	14.37	10.11	6.58
1949-1951	58.91	52.96	43.73	35.31	27.29	20.25	14.91	10.74	7.07
1954	61.0	54.8	45.5	36.9	28.7	21.3	15.7	11.9	9.1
<b>Nonwhite Females‡</b>									
1900-1902†	35.04	43.02	36.89	30.70	24.37	18.67	13.60	9.62	6.48
1901-1910†	35.65	42.52	36.17	30.09	23.81	18.08	13.17	9.52	6.50
1909-1911†	37.67	42.84	36.14	29.61	23.34	17.65	12.78	9.22	6.05
1919-1921†	46.92	44.54	37.15	31.48	25.60	19.76	14.69	10.25	6.58
1920-1929†	47.95	44.86	36.98	30.93	24.67	18.85	14.01	10.01	6.49
1929-1931	49.51	45.33	37.22	30.67	24.30	18.60	14.22	10.38	6.90
1930-1939	52.62	48.29	39.90	32.88	26.11	20.09	15.28	10.88	7.18
1939-1941	55.56	50.75	42.04	34.40	27.19	20.95	16.10	11.82	8.02
1949-1951	62.70	56.17	46.77	38.02	29.82	22.67	16.95	12.29	8.15
1954	65.8	59.1	49.5	40.4	31.9	24.4	18.3	14.0	10.1

\* Massachusetts only; white and nonwhite combined, the latter being about one percent of the total. Longevity in Massachusetts considered to be indicative of that in the country as a whole at that time. † Original Death Registration States. ‡ Death Registration States of 1920. § Data for periods 1900-1902 to 1929-1931 and 1939-1941 relate to Negroes only.

# Expectation of Life by Age and Sex; Selected Countries

Source: Statistical Office of the United Nations; "Population Index" published by the Office of Population Research, Princeton University, and the Population Association of America; and The U. S. Public Health Service.

Country	Period	Average future lifetime in years at stated age											
		Males						Females					
		0	1	10	20	40	60	0	1	10	20	40	60
North America													
United States													
White.....	1954	67.4	68.3	59.8	50.3	31.8	16.2	73.6	74.2	65.6	55.9	36.7	19.4
Nonwhite.....	1954	61.0	63.1	54.8	45.5	28.7	15.7	65.8	67.4	59.1	49.5	31.9	18.3
Canada <sup>1</sup> .....	1950-52	66.3	68.3	60.2	50.8	32.5	16.5	70.8	72.3	64.0	54.4	35.6	18.6
Mexico.....	1940	37.9	44.4	45.4	37.6	24.8	13.4	39.8	46.2	47.9	40.0	26.6	13.5
Puerto Rico.....	1939-41	45.1	50.4	48.6	40.1	*	*	46.9	51.5	50.0	41.8	*	*
South America													
Chile.....	1952	49.8	56.8	51.4	42.7	27.3	14.0	53.9	60.6	55.7	47.1	31.3	16.4
Venezuela.....	1941-42	45.8	51.2	48.2	39.9	26.2	14.0	47.6	52.5	49.7	41.6	28.5	15.8
Europe													
Austria.....	1949-51	61.9	65.9	58.0	48.7	30.7	15.1	67.0	70.1	62.2	52.6	34.2	17.3
Belgium.....	1946-49	62.0	65.3	57.4	48.0	30.6	15.5	67.3	69.7	61.7	52.3	34.2	17.5
Czechoslovakia.....	1929-32	51.9	59.9	54.0	45.3	29.0	14.4	55.2	62.0	56.1	47.4	31.0	15.4
Denmark.....	1946-50	67.8	70.0	61.7	52.2	33.8	17.1	70.1	71.7	63.3	53.6	35.0	17.9
England and Wales.....	1953	67.3	68.4	59.9	50.2	31.4	15.0	72.4	73.2	64.6	54.9	35.9	18.5
Finland.....	1946-50	58.6	61.1	53.4	44.4	28.0	13.8	65.9	68.0	60.2	51.0	33.6	16.8
France <sup>2</sup> .....	1950-51	63.6	66.1	57.9	48.4	30.4	15.1	69.3	71.2	63.0	53.4	35.0	18.1
Germany (Fed. Rep.).....	1949-51	64.6	67.8	59.8	50.3	32.3	16.2	68.5	71.0	62.8	53.2	34.7	17.5
Greece.....	1926-30	49.1	53.2	52.4	44.3	29.8	16.0	50.9	55.1	54.5	46.4	32.4	17.5
Hungary.....	1941	54.9	61.8	55.3	46.7	30.1	15.0	58.2	64.0	57.3	48.7	32.1	16.0
Iceland.....	1931-40	60.9	63.0	55.9	47.3	32.0	16.6	65.6	67.2	59.9	51.1	35.4	19.1
Ireland.....	1945-47	60.5	64.4	56.9	47.8	30.6	15.1	62.4	65.5	57.9	48.8	32.1	16.4
Italy.....	1930-32	53.8	59.7	55.5	46.8	30.4	15.2	56.0	61.3	57.2	48.5	3.21	16.1
Netherlands.....	1950-52	70.6	71.6	63.4	53.7	34.9	17.8	72.9	73.5	65.1	55.4	36.3	18.6
Norway.....	1946-50	69.3	70.7	62.6	53.3	35.2	18.4	72.7	73.6	65.2	55.6	37.0	19.5
Poland.....	1948	55.6	62.5	55.7	46.8	30.2	15.3	62.5	67.4	60.7	51.6	34.2	17.7
Portugal.....	1949-52	55.5	61.0	56.1	47.0	30.3	15.1	60.5	65.6	61.0	51.8	34.5	17.7
Scotland.....	1954	65.5	66.9	58.5	48.9	30.3	14.5	70.5	71.5	62.9	53.1	34.3	17.4
Spain.....	1940	47.1	52.4	48.6	40.0	25.4	12.4	53.2	58.8	55.5	47.0	30.7	15.2
Sweden.....	1946-50	69.0	69.9	61.6	52.1	33.8	17.1	71.6	72.1	63.6	54.0	35.3	18.0
Switzerland.....	1939-44	62.7	64.8	57.1	47.9	30.4	14.8	67.0	68.5	60.6	51.3	33.4	16.7
U.S.S.R. (Europe).....	1926-27	41.9	51.4	51.7	43.2	28.0	14.9	46.8	55.5	55.7	47.4	32.1	17.1
Asia													
Formosa.....	1935-40	41.1	47.6	45.6	37.2	22.7	11.3	45.7	51.5	50.8	42.4	27.7	14.2
India.....	1941-50	32.5	39.0	39.0	33.0	20.5	10.1	31.7	37.3	39.5	32.9	21.1	11.3
Israel (Jews).....	1954	67.5	69.1	61.0	51.7	33.1	16.1	70.5	71.9	63.7	54.0	35.0	17.7
Japan.....	1953	61.9	64.3	57.3	48.0	30.6	15.0	65.7	67.7	60.8	51.4	33.9	17.7
Korea.....	1938	47.2	51.1	49.9	41.6	26.2	12.8	50.6	54.5	53.2	45.1	30.0	14.8
Thailand.....	1947-48	48.7	52.0	47.9	39.8	25.6	12.7	51.9	55.2	50.9	42.7	28.4	14.2
Africa													
Egypt.....	1936-38	35.7	42.1	46.9	39.8	26.1	13.3	41.5	48.1	54.5	46.1	30.8	16.3
U. of So. Af. (Europeans).....	1945-47	63.8	65.5	57.7	48.4	30.4	15.3	68.3	69.6	61.7	52.3	34.1	18.0
Oceania													
Australia.....	1946-48	66.1	67.3	59.0	49.6	31.2	15.4	70.6	71.5	63.1	53.5	34.9	18.1
New Zealand (Europeans).....	1950-52	68.3	69.0	60.6	51.2	32.7	16.2	72.4	72.9	64.4	54.6	35.6	18.5

\* Not available. <sup>1</sup> Excluding Yukon and Northwest Territories. <sup>2</sup> Excluding Saar Territory

## CRIME

## Distribution of Arrests by Sex, 1955

Source: Federal Bureau of Investigation.

(Data in this table are from reports furnished the FBI by 1,477 cities over 2,500 in population. This represents about 47% of the urban population of the U. S. The FBI points out that these 1955 figures are not comparable to figures issued for previous years.)

Offense charged	Males	Per cent	Females	Per cent	Total	Per cent
<b>Criminal homicide:</b>						
Murder & nonnegligent manslaughter	1,698	.1	375	.2	2,073	.1
Manslaughter by negligence	1,176	.1	101	(?)	1,277	.1
Robbery	12,248	.7	540	.3	12,788	.7
Aggravated assault	19,434	1.2	3,714	1.8	23,148	1.2
Other assaults	65,671	4.0	7,806	3.8	73,477	3.9
Burglary—breaking or entering	43,432	2.6	1,008	.5	44,440	2.4
Larceny—(theft)	71,689	4.3	10,971	5.4	82,660	4.4
Auto theft	22,880	1.4	611	.3	23,491	1.3
Embezzlement and fraud	11,412	.7	2,113	1.0	13,525	.7
Stolen property; buying, receiving, etc.	2,972	.2	266	.1	3,238	.2
Forgery and counterfeiting	7,208	.4	1,294	.6	8,502	.5
Rape	4,599	.3	....	....	4,599	.2
Prostitution and commercialized vice	7,747	.5	17,089	8.3	24,836	1.3
Other sex offenses	14,662	.9	4,261	2.1	18,923	1.0
Narcotic drug laws	5,710	.3	1,178	.6	6,888	.4
Weapons; carrying, possessing, etc.	13,468	.8	860	.4	14,328	.8
Offenses against family and children	20,813	1.3	2,249	1.1	23,062	1.2
Liquor laws	30,199	1.8	6,829	3.3	37,028	2.0
Driving while intoxicated	92,178	5.6	3,987	1.9	96,165	5.2
Disorderly conduct	161,595	9.8	31,524	15.4	193,119	10.4
Drunkenness	713,936	43.1	59,007	29.0	772,943	41.6
Vagrancy	57,083	3.4	6,853	3.3	63,936	3.4
Gambling	38,793	2.3	4,158	2.0	42,951	2.3
Suspicion	63,500	3.8	7,011	3.4	70,511	3.8
All other offenses	172,824	10.4	31,032	15.2	203,856	10.9
<b>TOTAL ARRESTS, 1955</b>	<b>1,656,927</b>	<b>100.0</b>	<b>204,837</b>	<b>100.0</b>	<b>1,861,764</b>	<b>100.0</b>

<sup>1</sup> Less than 1/10 of 1 per cent.

## Arrests by Age Groups, 1955

Source: Federal Bureau of Investigation.

Age	Arrests	Age	Arrests	Age	Arrests	Age	Arrests	Age	Arrests
Under 15	80,122	18	39,064	22	45,647	30-34	232,152	50 & over	317,628
15	33,877	19	38,563	23	46,414	35-39	218,081	Not known	382
16	41,533	20	37,940	24	48,026	40-44	199,637	<b>TOTAL</b>	<b>1,861,764</b>
17	40,094	21	44,638	25-29	228,088	45-49	169,878		

## Estimated Number of Major Crimes in the U. S., 1946-55

Source: Federal Bureau of Investigation.

Crime	1946	1948	1950	1952	1954	1955
Murder and nonnegligent manslaughter	8,442	7,620	7,020	7,210	6,850	6,850
Manslaughter by negligence	4,701	5,390	5,330	5,650	5,410	5,610
Rape	12,117	16,180	16,580	17,240	18,030	19,100
Robbery	62,782	54,990	53,230	58,140	67,420	57,490
Aggravated assault	67,512	77,310	80,950	87,930	93,540	92,740
Burglary—breaking or entering	357,991	377,640	411,980	442,760	519,190	492,530
Larceny—(theft)	941,738	978,000	1,044,160	1,202,270	1,340,870	1,360,980
Auto theft	229,920	169,540	170,780	215,310	215,940	227,150
<b>Total major crimes</b>	<b>1,685,203</b>	<b>1,686,670</b>	<b>1,790,030</b>	<b>2,036,510</b>	<b>2,267,250</b>	<b>2,262,450</b>



## Sentenced Federal Prisoners Received from Courts, 1938-1955

Fiscal years ending June 30

Source: Federal Bureau of Prisons.

Offense	1938	1940	1945	1948	1950	1952	1954	1955
Counterfeiting*	.....	.....	47	64	260	154	88	96
Drug laws: Marihuana	395	550	454	588	878	654	509	457
Narcotics	1,937	1,700	680	855	1,151	1,278	1,366	1,237
Embezzlement and fraud	704	750	340	531	609	558	445	487
Forgery*	1,710	1,589	626	954	1,274	1,099	1,484	1,618
Immigration laws	2,844	2,270	3,996	3,200	3,463	4,548	7,277	4,952
Income tax†	.....	.....	15	103	164	184	203	237
Juvenile delinquency	.....	216	911	677	658	695	829	734
Kidnaping	41	37	20	36	41	42	41	37
Liquor laws	10,520	10,735	2,988	1,838	2,304	2,247	2,143	2,294
National Bank and Federal Reserve Act	155	157	51	141	165	164	294	334
Theft from interstate commerce	358	313	475	430	270	307	320	342
Transportation, etc., of stolen motor vehicle	1,563	1,512	1,072	2,612	2,486	2,605	2,838	2,989
White-slave traffic	447	378	209	221	185	173	242	240
Govt. reservation, D. C., high seas and terr. cases	994	1,021	986	1,069	1,145	1,369	1,487	1,458
Other	1,859	1,719	1,742	1,795	2,031	1,917	1,750	1,891
National-security offenses:								
Selective Service Acts	.....	.....	2,613	236	136	281	342	214
Other national-defense and security laws	.....	11	2,150	319	130	157	167	152
Military court-martial cases: Army	70	45	1,793	851	606	416	639	219
Navy	.....	.....	32	267	107	48	33	25
TOTAL ALL OFFENSES	23,597	23,003	21,200	16,787	18,063	18,896	22,497	20,013

\* Commitments for counterfeiting classified with forgery in 1938 and 1940. † Commitments for income-tax violation not classified separately in 1938 and 1940.

## Methods of Execution in the United States

Source: Information Please Almanac questionnaires to the states.

State	Method	State	Method
Alabama	Electrocution	New Mexico	Lethal gas
Arizona	Lethal gas	New York	Electrocution
Arkansas	Electrocution	North Carolina	Lethal gas
California	Lethal gas	North Dakota	No death penalty
Colorado	Lethal gas	Ohio	Electrocution
Connecticut	Electrocution	Oklahoma	Lethal gas <sup>1</sup>
Delaware	Hanging	Oregon	Lethal gas
D. C.	Electrocution	Pennsylvania	Electrocution
Florida	Electrocution	Rhode Island	No death penalty
Georgia	Electrocution	South Carolina	Electrocution
Idaho	Hanging	South Dakota	Electrocution
Illinois	Electrocution	Tennessee	Electrocution
Indiana	Electrocution	Texas	Electrocution
Iowa	Hanging	Utah	Hanging
Kansas	Hanging		or shooting
Kentucky	Electrocution	Vermont	Electrocution
Louisiana	Electrocution	Virginia	Electrocution
Maine	No death penalty	Washington	Hanging
Maryland	Lethal gas	West Virginia	Electrocution
Massachusetts	Electrocution	Wisconsin	No death penalty
Michigan	No death penalty	Wyoming	Lethal gas
Minnesota	No death penalty		( <sup>2</sup> )
Mississippi	Lethal gas	U. S. (Fed. Gov't.)	
Missouri	Lethal gas	Alaska	Hanging
Montana	Hanging	American Samoa	Hanging
Nebraska	Electrocution	Canal Zone	Hanging
Nevada	Lethal gas	Guam	Hanging
New Hampshire	Hanging	Hawaii	( <sup>3</sup> )
New Jersey	Electrocution	Puerto Rico	No death penalty
		Virgin Islands	Hanging <sup>4</sup>

<sup>1</sup> Electrocution until gas chamber is provided. <sup>2</sup> Method shall be that used by state in which sentence is imposed. If state does not have death penalty, Federal judge shall prescribe method for carrying out death sentence. <sup>3</sup> 1955 legislature abolished compulsory capital punishment (hanging) and repealed statutory provision for carrying out such punishment. However, death sentence may be imposed at discretion of jury in cases of first-degree murder, although no means are at present provided for carrying out execution. <sup>4</sup> In St. Croix only. NOTE: Method shown with each state is maximum penalty for murder and certain other crimes. In most states having capital punishment, jury or judge can specify whether sentence shall be death or life imprisonment.

## EDUCATION

## Elementary and Secondary Public School Statistics, 1954-55

Source: Information Please Almanac Questionnaire.

Note: The number of schools includes rural and one-room school houses. The number of pupils includes only full-time students. The average yearly expenditure is based on the average daily attendance.

State	Elementary			Secondary			Average yearly expenditure per pupil	Average yearly salary of teachers
	No. schools	No. pupils	No. teachers	No. schools	No. pupils	No. teachers		
Alabama	( <sup>1</sup> )	453,990	13,585	( <sup>1</sup> )	266,488	9,833	\$155.03	\$2,766.00
Arizona	451	166,041	5,373	76	42,793	1,763	288.10	4,192.00
Arkansas	1,614	329,712	7,865	538	90,427	5,671	131.00	2,284.00
California	3,771	1,787,679	51,608	694	490,071	26,998	312.40 <sup>2</sup>	4,707.00 <sup>2</sup>
Colorado <sup>3</sup>	1,137	191,347	6,667	372	58,189	4,284	273.30	3,457.00
Connecticut	736	283,074	8,710	141	96,927	4,283	238.07	4,283.00
Delaware	119 <sup>4</sup>	37,921	1,348	13 <sup>4</sup>	22,547	1,118	331.56	4,129.00
D. C. <sup>5</sup>	126	65,702	1,895	41	38,648	1,775	308.46	4,690.00
Florida <sup>6</sup>	1,218	445,873	14,006	465	255,611	10,094	226.21	3,794.37
Georgia	1,615	666,808	19,057	1,249	225,659	9,033	159.99	2,888.76
Idaho	491 <sup>6</sup>	104,968	3,372 <sup>7</sup>	132	35,950	1,401	225.00	3,424.33
Illinois <sup>8</sup>	1,864 <sup>8</sup>	1,037,886	36,307	( <sup>9</sup> )	325,374	15,905	327.57	4,000.83
Indiana	( <sup>10</sup> )	839,888	19,196	( <sup>10</sup> )	192,989	9,110	232.36	3,952.00
Iowa	3,156	412,584	15,633	819	126,160	8,970	270.33 <sup>11</sup>	3,485.00
Kansas	2,913	329,654	12,563	601	96,366	5,400	276.53	3,580.00
Kentucky	( <sup>12</sup> )	490,631	14,073	( <sup>12</sup> )	115,927	6,810	168.00 <sup>3</sup>	2,350.00 <sup>3</sup>
Louisiana <sup>3</sup>	1,080	426,648	12,205	556	125,843	6,166	229.75	3,645.62 <sup>13</sup>
Maine	1,192	138,822	4,970	194	33,908	1,971	224.78	2,879.00
Maryland	792	293,278	9,573	221	161,597	7,248	263.00	4,163.00
Massachusetts	1,708	497,478	18,429	413	225,586	10,869	282.90	4,205.00
Michigan	( <sup>14</sup> )	865,109	29,906	( <sup>14</sup> )	450,156	18,093	326.64	4,292.43
Minnesota	3,711	366,211	13,464	655	216,762	10,804	320.00	3,283.00
Mississippi	2,561	448,780	10,725	735	93,158	6,311	135.39	2,176.49
Missouri	3,794	563,771	18,165	629	160,968	6,802	349.74	3,266.00
Montana	1,236	92,222	4,193	178	30,145	1,713	338.91	3,708.00
Nebraska	4,303 <sup>8</sup>	196,757	9,259	469 <sup>8</sup>	62,548	3,435	260.33	3,353.00 <sup>3</sup>
Nevada	194	33,982	1,312	36	9,176	434	541.49	4,068.68
New Hampshire	450	66,538	2,406	82	19,892	1,085	260.33	3,310.00
New Jersey	1,664	677,564	23,766	274	174,598	8,919	328.14	4,370.00
New Mexico	( <sup>15</sup> )	142,517	( <sup>15</sup> )	( <sup>15</sup> )	37,440	( <sup>16</sup> )	270.21 <sup>3</sup>	4,221.47 <sup>17</sup>
New York	3,913	1,835,754	70,219	1,327	543,412	25,353	393.00	4,987.00
North Carolina	2,217	785,005	24,080	933	215,070	8,270	166.50	3,280.00
North Dakota <sup>3</sup>	2,681	92,880	5,050	370	28,662	1,765	269.76	2,770.63
Ohio	4,079 <sup>18</sup>	1,547,390 <sup>13</sup>	54,341 <sup>18</sup>	.....	.....	.....	264.63	4,010.09
Oklahoma	2,694	366,809	20,075	988	138,313	20,075	223.00	3,569.00
Oregon	1,084	245,341	10,021	224	79,434	3,970	343.86	4,187.00
Pennsylvania	5,209	1,102,284	38,692	1,045	643,446	30,311	281.89	4,173.00
Rhode Island	296	77,194	2,671	61	37,014	1,887	255.07	4,085.00
South Carolina	1,562	398,138	12,050	402	154,811	6,199	179.00	2,924.00
South Dakota	3,261	101,590	5,527	271	31,503	2,050	285.85	2,600.00 <sup>3</sup>
Tennessee	3,511 <sup>18</sup>	740,933 <sup>18</sup>	25,307 <sup>18</sup>	.....	.....	.....	157.00	2,824.79
Texas	4,398	1,318,616	39,295	1,563	354,985	19,202	248.22	3,800.00
Utah	379	119,476	3,409	142	71,976	2,508	241.37	3,827.63
Vermont	614	47,588	1,874	81	17,620	996	229.91	2,993.25
Virginia	2,248	540,537	15,607	488	183,938	8,649	188.33	3,123.00
Washington	1,131	331,221	10,859	383	153,676	6,093	293.44	4,294.62
West Virginia	3,234	298,148	10,322	383	159,600	6,245	175.65	3,056.84
Wisconsin	5,131	431,546	16,347	445	160,676	7,592	280.72	3,819.00
Wyoming	556	52,493	1,969	87	15,708	1,060	365.00	3,789.00

<sup>1</sup> Combined figure for elementary and secondary schools is 2,781. <sup>2</sup> Includes grades 13 and 14. <sup>3</sup> 1953-54. <sup>4</sup> Does not include 30 schools with grades 1-12. Total schools, 162. <sup>5</sup> Elementary: kindergarten through grade 6; secondary: grades 7-12. <sup>6</sup> Includes 35 junior high schools. <sup>7</sup> Includes 364 junior high school teachers. <sup>8</sup> School districts. <sup>9</sup> Districts: 291, 4-year high schools; 325 united operating at both elementary and secondary levels. <sup>10</sup> Combined figure for elementary and secondary schools is 2,821. <sup>11</sup> High school only. <sup>12</sup> Combined figure for elementary and secondary schools is 4,241. <sup>13</sup> Figure is for white high school teachers. <sup>14</sup> Combined figure for elementary and secondary schools was 4,532 in 1952-53. <sup>15</sup> Combined figure for elementary and secondary schools is 834. <sup>16</sup> Combined figure for elementary and secondary school teachers is 6,573. <sup>17</sup> Municipal schools only; rural schools, \$3,979.00. <sup>18</sup> Elementary and secondary schools combined.

# State Compulsory School Attendance Laws

Source: U. S. Office of Education.

State	Enactment*	Age limits	State	Enactment*	Age limits
Alabama .....	1915	7-16	Nebraska .....	1887	7-16
Arizona .....	1899	8-16	Nevada .....	1873	7-18
Arkansas .....	1909	7-16	New Hampshire ...	1871	6-16
California .....	1874	8-16	New Jersey .....	1875	7-16
Colorado .....	1889	8-16	New Mexico .....	1891	6-17
Connecticut .....	1872	7-16	New York .....	1874	7-16
Delaware .....	1907	7-16	North Carolina ...	1907	7-16
D. C. ....	1884	7-16	North Dakota .....	1883	7-17
Florida .....	1915	7-16	Ohio .....	1877	6-18
Georgia .....	1916	7-16	Oklahoma .....	1907	7-18
Idaho .....	1887	7-16	Oregon .....	1889	7-18
Illinois .....	1883	7-16	Pennsylvania .....	1895	8-17
Indiana .....	1897	7-16	Rhode Island .....	1883	7-16
Iowa .....	1902	7-16	South Carolina ...	1915	7-16
Kansas .....	1874	7-16	South Dakota .....	1883	7-16
Kentucky .....	1896	7-16	Tennessee .....	1905	7-17
Louisiana .....	1910	7-16	Texas .....	1915†	7-16
Maine .....	1875	7-16	Utah .....	1890	6-18
Maryland .....	1902	7-16	Vermont .....	1867	7-16
Massachusetts ...	1852	7-16	Virginia .....	1908	7-16
Michigan .....	1871	6-16	Washington .....	1871	8-16
Minnesota .....	1885	7-16	West Virginia .....	1897	7-16
Mississippi .....	1918	7-16	Wisconsin .....	1879	7-16
Missouri .....	1905	7-16	Wyoming .....	1876	7-16
Montana .....	1883	8-16			

\* Date of enactment of 1st compulsory school attendance law. † A compulsory school attendance law was contained in a law of 1873 establishing free public schools. However, the provision was omitted in superseding legislation passed in 1876.

## Enrollment in Full-time Day Schools, 1909-54

Source: U. S. Office of Education.

Type of school	1909-1910	1919-1920	1929-1930	1939-1940	1949-1950	1953-1954
Kindergartens: Public.....	293,970 <sup>1</sup>	481,266	723,443	594,647	1,034,203	1,474,000
Nonpublic.....	52,219 <sup>1</sup>	29,683	54,456	57,341	133,000	317,000
Residential schools for exceptional children..	( <sup>2</sup> )	( <sup>2</sup> )	5,164 <sup>3</sup>	5,777	4,459 <sup>8</sup>	8,000 <sup>9</sup>
Elementary schools: Public.....	16,604,821	18,897,661	20,555,150	18,237,451	18,370,490	21,071,800
Nonpublic.....	1,506,218	1,455,878	2,255,430	2,095,938	2,574,779 <sup>9</sup>	3,274,840
Residential schools for exceptional children..	71,307	99,234 <sup>4</sup>	124,153 <sup>3</sup>	55,954	48,894 <sup>8</sup>	53,900 <sup>9</sup>
Other <sup>5</sup> .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	59,547	35,682	57,403
Total kindergartens and elementary schools ...	18,528,535	20,963,722	23,717,796	21,106,655	22,201,505	26,256,943
Secondary schools: Public high schools.....	915,061	2,200,389	4,399,422	6,601,444	5,706,734	6,290,245
Nonpublic high schools.....	117,400	213,920	341,158	457,768	672,362 <sup>9</sup>	747,323
Residential schools for exceptional children..	4,005	4,500 <sup>4</sup>	4,388	9,727	9,784 <sup>8</sup>	11,200 <sup>9</sup>
Other <sup>7</sup> .....	78,932	81,367	59,287	54,070	38,162	49,457
Total secondary schools.....	1,115,398	2,500,176	4,804,255	7,123,009	6,427,042	7,098,225
Higher education: Publicly controlled <sup>6</sup> .....	116,560	315,382	532,647	796,531	1,354,902	1,356,481
Privately controlled <sup>6</sup> .....	188,655	282,498	568,090	697,672	1,304,119	1,153,231
Total higher education.....	355,215	597,880	1,100,737	1,494,203	2,659,021	2,514,712

<sup>1</sup> 1911-12. <sup>2</sup> Data not available. <sup>3</sup> 1926-27. <sup>4</sup> 1917-18. <sup>5</sup> Distribution by control estimated before 1939-40. Elementary grades in college and teacher-training elementary schools. <sup>7</sup> Secondary grades in college and teacher-training secondary schools. <sup>8</sup> 1945-46. <sup>9</sup> Estimated.



## Statistics of State School Systems, 1940-54

Source: U. S. Office of Education.

Years	Enrollment					High-school graduates		Current expenditure per pupil in average daily attendance	Expenditure for textbooks free to pupils
	Total	Elementary schools		Secondary schools		Boys	Girls		
		Boys	Girls	Boys	Girls				
1941-1942. . .	24,562,473	9,336,067	8,838,601	3,089,434	3,298,371	535,156	626,043	\$ 98.31	\$27,012,724
1942-1943. . .	24,155,146	9,237,002	8,796,078	2,891,633	3,230,433	489,115	597,383	104.85	27,090,248
1943-1944. . .	23,266,616	9,081,270	8,631,826	2,553,356	3,000,164	393,418	559,836	116.99	23,987,277
1944-1945. . .	23,225,784	9,053,952	8,611,642	2,565,699	2,994,491	384,673	559,863	125.41	23,954,676
1945-1946. . .	23,299,941	9,098,013	8,579,731	2,633,117	2,989,080	418,725	555,682	136.41	27,447,595
1946-1947. . .	23,659,158	9,187,105	8,634,376	2,822,633	3,015,044	505,218	568,461	152.80	29,805,963
1947-1948. . .	23,944,532	9,429,268	8,861,959	2,747,061	2,906,244	507,649	565,529	179.43	37,553,364
1948-1949. . .	24,476,658	9,707,391	9,110,863	2,759,298	2,899,106	499,984	557,960	197.65	43,481,000
1949-1950. . .	25,111,000	10,018,000	9,387,000	2,812,000	2,895,000	505,394	558,050	208.83	48,076,000
1950-1951. . .	25,705,000	10,275,000	9,625,000	2,846,000	2,960,000	496,700	545,900	224.00	52,814,000
1951-1952. . .	26,563,000	10,649,000	10,032,000	2,885,000	2,997,000	501,723	553,863	244.24	53,677,000
1953-1954* . .	28,836,000	11,609,000	10,937,000	3,085,000	3,205,000	544,575	584,966	264.76	72,660,000

\* Data not available for 1952-53; number of boys and girls in elementary schools in 1953-54 are estimated from total enrollment.

## Federal Government Funds for Education, Fiscal Year 1953-54

Source: U. S. Office of Education.

Administering agency and purpose	Amount	Administering agency and purpose	Amount
Dept. of Health, Education and Welfare.....	\$395,093,504	Department of the Interior.....	\$ 53,896,399
Office of Education.....	242,881,191	Education of Indians in U. S. ....	29,912,408
Other.....	152,212,313	Education of natives in Alaska.....	2,884,785
Department of Agriculture.....	239,301,882	Other.....	21,099,206
School lunch program.....	176,310,069	Department of the Treasury.....	2,537,000
Other.....	62,991,813	Coast Guard Academy.....	2,480,000
Veterans Administration.....	588,113,774	Other.....	57,000
Vocational rehabilitation.....	41,294,243	District of Columbia.....	2,714,411
Education and training.....	546,819,531	Canal Zone: Public education.....	2,959,042
Dept. of Commerce: Maritime Commission.....	4,353,600	Department of Justice.....	440,979
Federal merchant marine.....	2,142,900	Department of State.....	23,265,497
Other.....	2,210,700	Atomic Energy Commission.....	22,730,652
Department of Defense.....	44,180,068	Foreign Operations Administration.....	14,789,000
U. S. Military Academy.....	7,926,000	National Science Foundation.....	5,886,332
U. S. Naval Academy.....	7,507,000	TOTAL.....	\$1,400,262,143
Other.....	28,747,068		

## Public and Private Residential Schools for Exceptional Children

Source: U. S. Office of Education.

Type and year	States reporting*	Schools reporting	Pupils	Type and year	States reporting*	Schools reporting	Pupils
<b>Blind:</b>				<b>Mentally deficient:</b>			
1927.....	42	52	5,283	1936.....	47	130	21,889
1931.....	41	55	5,530	1940.....	47	105	21,883
1936.....	43	57	5,921	1947.....	47	140	21,562
1940.....	42	52	5,947				
1947.....	43	56	5,235	<b>Epileptic:</b>			
				1940.....	†	†	1,117
<b>Deaf:</b>				1947.....	10	10	1,096
1927.....	45	77	13,966				
1931.....	46	84	14,890	<b>Delinquent:</b>			
1936.....	47	81	15,505	1936.....	50	155	31,418
1940.....	47	81	14,815	1940.....	51	144	29,384
1947.....	47	81	13,123	1947.....	51	167	22,745

\* Includes D. C., Territory of Hawaii and Puerto Rico. † Data not available. NOTE: Total number of children (all types), 1946-47: Continental U. S., 63,137; outlying parts of the U. S., 624.

## High-school and College Graduates, 1900-55

(Public and private schools)

Source: U. S. Office of Education.

Year of graduation	HIGH SCHOOL			COLLEGE*		
	Men	Women	Total	Men	Women	Total
1900.....	38,075	56,808	94,883	22,173	5,237	27,410
1910.....	63,676	92,753	156,429	28,762	8,437	37,199
1920.....	123,684	187,582	311,266	31,980	16,462	48,622
1929-30.....	300,376	366,528	666,904	73,615	48,869	122,484
1940-41.....	578,718	642,757	1,221,475	106,859	79,065	185,924
1947-48.....	562,863	627,046	1,189,909	175,456	95,563	271,019
1948-49.....	564,000	629,000	1,193,000	263,554	101,874	365,428
1949-50.....	570,700	629,000	1,199,700	328,841	103,217	432,058
1950-51.....	562,500	619,300	1,181,800	278,240	104,306	382,546
1951-52.....	569,200	627,300	1,196,500	225,981	104,005	329,986
1952-53†.....	572,800	625,500	1,198,300	199,793	103,256	303,049
1953-54.....	612,500	663,600	1,276,100	186,528	104,297	290,825
1954-55†.....	612,300	663,400	1,275,000	182,463	102,675	285,138

\* 1st-level degree in given field of study. † High-school graduates are estimated.

## Enrollment in Vocational Classes, 1955\*

Source: U. S. Office of Education.

Type of class	Agriculture	Distributive occupations	Home economics	Trades & industry	Total
Evening.....	272,363	164,591	530,725	421,321	1,389,000
Part-time.....	46,811	70,764	82,907	195,702	396,184
All-day.....	456,964	.....	942,214	253,931	1,653,109
All types.....	776,138	235,355	1,555,846	870,954	3,438,293

\* Provisional figures, subject to final review of state reports.

## Number Surviving Through College Entrance per 1,000 Pupils

Source: U. S. Office of Education.

Grade or year	1931-1932	1934-1935	1937-1938	1938-1939	1939-1940	1940-1941	1941-1942	1942-1943	1943-1944	1944-1945	1945-1946	1946-1947
Elementary: Fifth.....	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sixth.....	929	953	954	955	963	968	952	954	972	952	959	954
Seventh.....	884	892	901	908	916	910	905	909	914	929	944	945
Eighth.....	818	842	850	853	846	886	834	847	870	858	875	919
High School: I.....	780	803	811	796	781	781	789	807	827	848	872	872
II.....	651	711	679	655	673	697	698	713	745	748	766	775
III.....	546	610	519	532	552	566	581	604	630	650	662	641
IV.....	481	512	428	444	476	507	514	539	557	549	552	583
Graduates.....	432	467	398	419	450	481	488	505	524	522	524	553
Year of graduation.....	1939	1942	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
Enter college.....	154	129	*	*	*	*	*	205	218	234	266	283

\* Because of veteran students, it is not possible to calculate retention rates.

## White and Negro School Statistics, 1953-54

(Public elementary and secondary schools in 17 Southern states and the District of Columbia)

Source: U. S. Office of Education.

State	Enrollment		Instructional staff <sup>1</sup>		Average annual salary of instructional staff		Expenditure <sup>2</sup> per pupil in A.D.A. <sup>3</sup>	
	White	Negro	White	Negro	White	Negro	White	Negro
Alabama.....	460,507	243,140	15,764	7,912	\$2,834	\$2,681	\$111.99	\$105.02
Arkansas.....	315,111	99,844	10,907	2,902	2,360	2,008	99.08	71.78
Delaware.....	47,237	9,968	2,109	411	.....	.....	.....	.....
D. C.....	49,106	60,029	1,770	1,941	4,998	4,614	240.27	186.71
Florida.....	487,698	140,779	17,836	5,300	3,836	3,613	175.92	160.61
Georgia.....	533,508	274,123	19,848	8,576	.....	.....	.....	.....
Kentucky.....	553,051	38,517	18,843	1,422	.....	.....	.....	.....
Louisiana.....	343,914	208,577	13,228	6,342	.....	.....	165.08	122.07
Maryland.....	338,308	89,984	12,691	3,022	.....	.....	.....	.....
Mississippi.....	263,478	263,930	9,609	6,777	2,261	1,302	98.15	43.17
Missouri.....	637,705	65,962	23,564	2,034	.....	.....	132.46	124.85
North Carolina.....	683,284	284,782	23,971	8,944	3,335	3,406	.....	.....
Oklahoma.....	446,989	36,111	17,521	1,615	3,265	3,346	161.57	165.88
South Carolina.....	304,908	234,529	11,219	7,181	.....	.....	.....	.....
Tennessee.....	598,247	118,048	20,329	3,771	.....	.....	.....	.....
Texas.....	1,388,828	215,465	50,717	7,697	.....	.....	.....	.....
Virginia.....	523,165	172,112	19,252	5,868	3,076	3,104	.....	.....
West Virginia.....	426,345	25,646	15,437	983	.....	.....	.....	.....
TOTAL.....	8,401,389	2,581,546	304,615	82,698	.....	.....	.....	.....

<sup>1</sup> Includes supervisors, principals, teachers, etc. <sup>2</sup> For instruction. <sup>3</sup> Average daily attendance.

## Degrees Granted by Institutions of Higher Education, 1954-55

(Aggregate United States\*)

Source: U. S. Office of Education.

Field of study	Bachelor's and first professional		Master's and second professional		Doctor's	
	Men	Women	Men	Women	Men	Women
Agriculture.....	7,052	118	1,336	28	499	8
Biological sciences.....	6,519	2,531	1,224	385	895	99
Business & Commerce.....	35,564	6,091	3,088	248	134	10
Chemistry.....	4,781	1,139	1,036	137	969	36
Economics.....	5,678	686	539	78	232	9
Education.....	14,871	38,383	15,108	12,512	1,221	249
Engineering.....	22,527	62	4,471	13	599	...
English.....	5,121	7,978	835	834	289	52
History.....	6,707	2,833	833	366	282	28
Home economics.....	81	7,169	18	687	14	47
Languages, foreign.....	1,413	2,135	409	380	144	43
Law.....	7,937	289	357	16	21	1
Mathematics.....	2,724	1,310	613	148	239	11
Medicine, M.D. only.....	6,718	338	...	...	...	...
Music.....	2,553	3,786	1,062	615	62	6
Nursing.....	61	5,179	10	540	...	3
Pharmacy.....	3,065	331	115	16	60	7
Physical education.....	4,779	2,529	913	319	79	21
Physics.....	1,920	76	701	28	499	12
Political science.....	4,415	1,085	414	84	171	10
Psychology.....	3,009	2,523	876	417	604	84
Sociology.....	2,333	3,200	348	128	147	20
Speech & Dramatic arts.....	1,789	1,893	466	310	136	21
Theology.....	4,425	99	666	27	144	5
TOTAL.....	183,602	103,799	38,740	19,464	8,014	826

\* Includes continental U. S. plus outlying parts. † Includes studies not listed.



## School Enrollment, 5 to 34 Years Old, October 1953 to October 1955

*Source: U. S. Bureau of the Census.*

Sex and age	October 1953		October 1954		October 1955	
	Number enrolled	% enrolled	Number enrolled	% enrolled	Number enrolled	% enrolled
<b>MALE</b>						
5 and 6 years.....	2,882,000	77.8	2,746,000	76.3	2,821,000	78.1
7 to 13 years.....	9,404,000	99.2	10,139,000	99.2	10,725,000	99.2
14 to 17 years.....	3,844,000	86.8	4,002,000	88.7	4,097,000	88.6
18 and 19 years.....	642,000	37.7	730,000	40.6	752,000	42.5
20 to 24 years.....	636,000	18.5	677,000	19.1	686,000	18.1
25 to 29 years.....	301,000	5.5	356,000	6.7	371,000	7.0
30 to 34 years.....	113,000	2.0	109,000	1.9	123,000	2.1
<b>TOTAL.....</b>	<b>17,822,000</b>	<b>52.7</b>	<b>18,759,000</b>	<b>54.0</b>	<b>19,573,000</b>	<b>54.9</b>
<b>FEMALE</b>						
5 and 6 years.....	2,809,000	79.4	2,698,000	78.3	2,700,000	78.1
7 to 13 years.....	9,120,000	99.6	9,813,000	99.6	10,304,000	99.1
14 to 17 years.....	3,695,000	85.0	3,782,000	85.4	3,873,000	85.2
18 and 19 years.....	538,000	25.9	538,000	25.4	480,000	22.5
20 to 24 years.....	346,000	6.4	322,000	6.0	324,000	6.1
25 to 29 years.....	33,000	0.5	103,000	1.7	105,000	1.8
30 to 34 years.....	87,000	1.4	68,000	1.1	68,000	1.1
<b>TOTAL.....</b>	<b>16,628,000</b>	<b>45.2</b>	<b>17,324,000</b>	<b>46.3</b>	<b>17,853,000</b>	<b>47.0</b>
<b>TOTAL</b>						
5 and 6 years.....	5,691,000	78.6	5,444,000	77.3	5,520,000	78.1
7 to 13 years.....	18,525,000	99.4	19,952,000	99.4	21,028,000	99.2
14 to 17 years.....	7,538,000	85.9	7,784,000	87.1	7,970,000	86.9
18 and 19 years.....	1,180,000	31.2	1,268,000	32.4	1,232,000	31.5
20 to 24 years.....	981,000	11.1	999,000	11.2	1,010,000	11.1
24 to 29 years.....	334,000	2.9	459,000	4.1	475,000	4.2
30 to 34 years.....	200,000	1.7	176,000	1.5	192,000	1.6
<b>TOTAL.....</b>	<b>34,450,000</b>	<b>48.8</b>	<b>36,083,000</b>	<b>50.0</b>	<b>37,426,000</b>	<b>50.8</b>

**NOTE:** Figures include children enrolled in kindergarten.

## Estimated Public and Private School Enrollment, By Type of School, 1955-56

*Source: U. S. Office of Education.*

Type of school	Enrollment	Type of school	Enrollment
<b>Elementary schools*</b>		<b>Higher Education</b>	
Public.....	25,478,000	Universities, colleges, professional schools, including junior colleges and normal schools...	3,232,000
Private and parochial.....	3,985,500	<b>Other schools</b>	
Residential schools for exceptional children.....	73,600	Private commercial schools.....	500,000
Model and practice schools in teacher-training institutions.....	39,500	Nurse-training schools (not affiliated with colleges and universities).....	91,400
Federal schools for Indians.....	20,400	Total other schools.....	591,400
Federal schools under P.L. 874†.....	21,000	Grand total.....	41,553,000
Total elementary.....	29,618,000		
<b>Secondary schools</b>			
Public.....	7,175,000		
Private and parochial.....	870,600		
Residential schools for exceptional children.....	12,600		
Model and practice schools in teacher-training institutions and preparatory dept. of colleges..	42,000		
Federal schools for Indians.....	10,400		
Federal schools under P.L. 874†.....	1,000		
Total secondary.....	8,111,600		

**NOTE:** These estimates include enrollments for the entire school or college year; they are not restricted to September enrollments alone.

\* Including kindergartens. † Includes only "schools operated on post by a Federal agency."

## Academic Degree Abbreviations

Source: for this page: American Council on Education.

Ae.E.	Aeronautical Engineer	G.L.	Graduate in Law
B.A.	Bachelor of Arts	G.N.	Graduate Nurse
B.Ag.	Bachelor of Agriculture	G.Ph.	Graduate in Pharmacy
B.App.Arts	Bachelor of Applied Arts	H.H.D.	Doctor of Humanities
B.Arch.	Bachelor of Architecture	L.H.D.	Doctor of Humane Letters
B.B.A.	Bachelor of Business Administration	Litt.M.	Master of Letters
B.B.S.	Bachelor of Business Science	LL.B.	Bachelor of Laws
B.C.E.	Bachelor of Civil Engineering	LL.D.	Doctor of Laws
B.Ch.E.	Bachelor of Chemical Engineering	LL.M.	Master of Laws
B.D.	Bachelor of Divinity	M.A.	Master of Arts
B.Dr.Art	Bachelor of Dramatic Art	M.Aero.E.	Master of Aeronautical Engineering
B.Ed.	Bachelor of Education	M.C.E.	Master of Civil Engineering
B.E.E.	Bachelor of Electrical Engineering	M.C.S.	Master of Commercial Science
B.F.A.	Bachelor of Fine Arts	M.D.	Doctor of Medicine
B.J.	Bachelor of Journalism	M.E.	Mechanical Engineer
B.L.	Bachelor of Letters	M.Ed.	Master of Education
B.Litt.	Bachelor of Literature	Med.Sc.D.	Doctor of Medical Science
B.Med.	Bachelor of Medicine	M.Eng.	Mining Engineer
B.Mus.	Bachelor of Music or in Music	M.F.	Master of Forestry
B.N.	Bachelor of Nursing	M.F.A.	Master of Fine Arts
B.Pharm.	Bachelor of Pharmacy	M.Int.Med.	Master of Internal Medicine
B.Ph.	Bachelor of Philosophy	M.M.	Master of Music
B.S.	Bachelor of Science	M.Mech.Eng.	Master of Mechanical Engineering
B.Th.	Bachelor of Theology	M.Mus.	Master of Music
C.E.	Civil Engineer	M.N.	Master of Nursing
Ch.E.	Chemical Engineer	M.P.H.	Master of Public Health
D.C.E.	Doctor of Civil Engineering	M.R.E.	Master of Religious Education
D.C.L.	Doctor of Civil Law	M.R.P.	Master in Regional Planning
D.C.S.	Doctor of Commercial Science	M.S.	Master of Science
D.D.	Doctor of Divinity	M.Soc.Wk.	Master of Social Work
D.D.S.	Doctor of Dental Surgery	M.Surgery	Master in Surgery
D.Ed.	Doctor of Education	M.Th.	Master of Theology
D.M.L.	Doctor of Modern Languages	O.D.	Doctor of Optometry
D.M.S.	Doctor of Medical Science	Phar.D.	Doctor of Pharmacy
D.P.H.	Doctor of Public Health	Ph.B.	Bachelor of Philosophy
D.R.E.	Doctor of Religious Education	Ph.C.	Pharmaceutical Chemist
D.Sc.	Doctor of Science	Ph.D.	Doctor of Philosophy
D.V.M.	Doctor of Veterinary Medicine	Ph.G.	Graduate in Pharmacy
E.E.	Electrical Engineer	Ph.L.	Licentiate in Philosophy
E.M.	Engineer of Mines	Ph.M.	Master of Philosophy
E.Met.	Engineer of Metallurgy	S.Sc.D.	Doctor of Social Science
		S.T.B.	Bachelor of Sacred Theology
		S.T.D.	Doctor of Sacred Theology
		S.T.M.	Master of Sacred Theology

## Colors of Academic Degrees

Agriculture	Maize	Library Science	Lemon
Arts and Letters	White	Medicine	Green
Commerce & Accountancy	Drab	Music	Pink
Dentistry	Lilac	Oratory	Silver gray
Economics	Copper	Pharmacy	Olive green
Education	Light blue	Philosophy	Dark blue
Engineering	Orange	Physical Education	Sage green
Fine Arts, Architecture	Brown	Public Health	Salmon pink
Forestry	Russet	Science	Golden yellow
Humanities	Crimson	Theology	Scarlet
Law	Purple	Veterinary Science	Gray

## Accredited U. S. Colleges and Universities

### Spring Semester, 1956

Only schools fully accredited by at least one of the six regional accrediting associations are listed. The number of students is for matriculated undergraduate and graduate students who are working for a degree.

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Abilene Christian College; Abilene, Tex. (1906).....	Don H. Morris.....	1,978 C	Private
Adams State College; Alamosa, Colo. (1925).....	Fred J. Plachy.....	500 C	State
Adelphi College; Garden City, N. Y. (1896).....	Paul D. Eddy.....	2,153 C	Private
Agnes Scott College; Decatur, Ga. (1889).....	Wallace M. Alston.....	562 F	Presbyterian <sup>4</sup>
Akron, University of; Akron, Ohio (1870).....	Norman P. Auburn.....	4,183 C	City
Alabama, University of; University, Ala. (1831).....	Oliver C. Carmichael.....	6,417 C	State
Alabama A & M College; Normal, Ala. (1875).....	J. F. Drake.....	1,033 C	State
Alabama College; Montevallo, Ala. (1896).....	F. Edward Lund.....	501 F <sup>8</sup>	State
Alabama Polytechnic Institute; Auburn, Ala. (1872) <sup>6</sup> .....	Ralph B. Draughon.....	7,862 C	State
Alabama State College for Negroes; Montgomery, Ala. <sup>11</sup> .....	H. C. Trenholm.....	2,379 C	State
Alabama State Teachers College; Florence, Ala. (1872).....	E. B. Norton.....	1,204 C	State
Alabama State Teachers College; Jacksonville, Ala. (1883).....	Houston Cole.....	1,997 C	State
Alabama State Teachers College; Livingston, Ala. (1840) <sup>10</sup> .....	D. P. Culp.....	372 C	State
Alabama State Teachers College; Troy, Ala. (1887).....	C. B. Smith.....	967 C	State
Alaska, University of; College, Alaska (1917).....	E. N. Patty.....	435 C	Territory
Albany State College; Albany, Ga. (1903).....	William H. Dennis, Jr.....	441 C	State
Albertus Magnus College; New Haven, Conn. (1925).....	Sister Mary Louise.....	253 F	Catholic <sup>4</sup>
Albion College; Albion, Mich. (1835).....	William W. Whitehouse.....	1,199 C	Methodist <sup>4</sup>
Albright College; Reading, Pa. (1856).....	Harry V. Masters.....	670 C	Evan. Un. Breth. <sup>4</sup>
Alcorn A & M College; Lorman, Miss. (1871).....	J. R. Otis.....	585 C	State
Alfred University; Alfred, N. Y. (1836) <sup>12</sup> .....	M. Ellis Drake.....	1,170 C	Private
Allegheny College; Meadville, Pa. (1815).....	Lawrence L. Pelletier.....	995 C	Methodist <sup>4</sup>
Allen University; Columbia, S. C. (1870).....	Samuel R. Higgins.....	696 C	A.M.E.
Alliance College; Cambridge Springs, Pa. (1912).....	A. P. Coleman.....	134 C	Private
Alma College; Alma, Mich. (1886).....	(Vacant).....	659 C	Presbyterian <sup>4</sup>
Alverno College; Milwaukee, Wis. (1890).....	Sister M. Augustine.....	739 F	Catholic <sup>4</sup>
American International College; Springfield, Mass. (1885).....	John F. Hines.....	1,294 C	Private
American University; Washington, D. C. (1893).....	Hurst R. Anderson.....	5,098 C	Methodist
Amherst College; Amherst, Mass. (1821).....	Charles W. Cole.....	1,050 M	Private
Anderson College & Theological Seminary; Anderson, Ind. (1917).....	John A. Morrison.....	1,083 C	Church of God
Anna Maria College for Women; Paxton, Mass. (1946).....	Sister Irene Marie.....	185 F	Catholic <sup>4</sup>
Antioch College; Yellow Springs, Ohio (1853).....	Samuel B. Gould.....	998 C	Private
Appalachian State Teachers College; Boone, N. C. (1903).....	William H. Plemmons.....	1,864 C	State
Aquinas College; Grand Rapids, Mich. (1922).....	Msgr. A. F. Bukowski.....	580 C	Catholic
Arizona, University of; Tucson, Ariz. (1885).....	Richard A. Harvill.....	6,256 C	State
Arizona State College; Flagstaff, Ariz. (1899).....	Lacey A. Eastburn.....	892 C	State
Arizona State College; Tempe, Ariz. (1885).....	Grady Gammage.....	5,162 C	State
Arkansas, University of; Fayetteville & Little Rock, Ark. (1871).....	John T. Caldwell.....	5,257 C	State
Arkansas A & M College; College Heights, Ark. (1909).....	Horace E. Thompson.....	832 C	State
Arkansas A, M & Normal College; Pine Bluff, Ark. (1875).....	Lawrence A. Davis.....	1,032 C	State
Arkansas Polytechnic College; Russellville, Ark. (1909).....	J. W. Hull.....	1,018 C	State
Arkansas State College; Jonesboro, Ark. (1910).....	Carl R. Reng.....	2,048 C	State
Arkansas State Teachers College; Conway, Ark. (1907).....	Silas D. Snow.....	1,184 C	State
Aroostook State Teachers College; Presque Isle, Maine (1903).....	Clifford O. T. Wieden.....	92 C	State
Art Center School; Los Angeles, Calif. (1931).....	Edward A. Adams.....	731 C	Private
Asbury College; Wilmore, Ky. (1890).....	Z. T. Johnson.....	848 C	Private
Ashland College; Ashland, Ohio (1878).....	Glenn L. Clayton.....	673 C	Brethren
Assumption College; Worcester, Mass. (1904).....	V. Rev. A. H. Desautels.....	274 M <sup>9</sup>	Catholic <sup>4</sup>
Athens College; Athens, Ala. (1822).....	Perry B. James.....	395 C	Methodist <sup>4</sup>
Atlanta University System.....			
Atlanta University; Atlanta, Ga. (1865).....	Rufus E. Clement.....	578 C	Private
Morehouse College; Atlanta, Ga. (1867).....	Benjamin E. Mays.....	683 M	Private
Spelman College; Atlanta, Ga. (1881).....	Albert E. Manley.....	479 F	Baptist <sup>4</sup>
Atlantic Christian College; Wilson, N. C. (1902).....	Travis A. White.....	750 C	Christian
Atlantic Union College; South Lancaster, Mass. (1882).....	L. M. Stump.....	463 C	7th Day Adven.
Augsburg College & Theological Seminary; Minneapolis (1869).....	Bernhard Christensen.....	672 C	Lutheran
Augustana College; Rock Island, Ill. (1860).....	Conrad Bergendoff.....	1,226 C	Lutheran
Augustana College; Sioux Falls, S. Dak. (1860).....	Lawrence M. Stavig.....	969 C	Lutheran
Aurora College; Aurora, Ill. (1893).....	Theodore P. Stephens.....	448 C	Adven. Christ.
Austin College; Sherman, Tex. (1849).....	John D. Moseley.....	623 C	Presbyterian
Austin Peay State College; Clarksville, Tenn. (1929).....	Halbert Harvill.....	995 C	State
Babson Institute; Babson Park, Mass. (1919).....	Edward B. Hinkley.....	538 M	Private
Baker University; Baldwin, Kans. (1858).....	Nelson P. Horn.....	588 C	Methodist
Baldwin-Wallace College; Berea, Ohio (1845).....	A. B. Bonds, Jr.....	1,606 C	Methodist



Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Ball State Teachers College; Muncie, Ind. (1918).....	John R. Emens.....	3,741 C	State
Barat College of the Sacred Heart; Lake Forest, Ill. (1919).....	Mother Margaret Burke.....	285 F	Catholic <sup>4</sup>
Barber-Scotia College; Concord, N. C. (1867).....	L. S. Cozart.....	225 C	Presbyterian
Bard College; Annandale-on-Hudson, N. Y. (1860).....	James H. Case, Jr.....	124 C	Private
Barnard College; New York, N. Y. (1889) <sup>7</sup> .....	Millicent C. McIntosh.....	1,300 F	Private
Barry College; Miami, Fla. (1940).....	Rev. Mother M. Gerald.....	299 F	Catholic <sup>4</sup>
Bates College; Lewiston, Maine (1864).....	Charles F. Phillips.....	765 C	Private
Baylor University; Waco, Tex. (1845).....	William R. White.....	4,809 C	Baptist
Beaver College; Jenkintown, Pa. (1853).....	Raymon Kistler.....	546 F	Presbyterian <sup>4</sup>
Belhaven College; Jackson, Miss. (1894).....	McFerran Crowe.....	201 C	Presbyterian
Bellarmine College; Plattsburgh, N. Y. (1952) <sup>10</sup> .....	V. Rev. John J. McMahon.....	119 M	Catholic
Beloit College; Beloit, Wis. (1846).....	Miller Upton.....	964 C	Congregational
Benedict College; Columbia, S. C. (1870).....	J. A. Bacoats.....	770 C	Baptist <sup>4</sup>
Bennett College; Greensboro, N. C. (1873).....	Willis B. Player.....	428 F	Methodist <sup>4</sup>
Bennington College; Bennington, Vt. (1925).....	Frederick Burkhardt.....	317 F <sup>8</sup>	Private
Berea College; Berea, Ky. (1855).....	Francis S. Hutchins.....	1,051 C	Private
Bethany College; Bethany, W. Va. (1840).....	Perry E. Gresham.....	535 C	Disc. of Christ <sup>4</sup>
Bethany College; Lindsborg, Kans. (1881).....	Robert A. L. Mortvedt.....	234 C	Lutheran
Bethel College; McKenzie, Tenn. (1842).....	Roy N. Baker.....	520 C	Presbyterian
Bethel College; North Newton, Kans. (1887).....	D. C. Wedel.....	402 C	Mennonite <sup>4</sup>
Bethune-Cookman College; Daytona Beach, Fla. (1904).....	Richard V. Moore.....	745 C	Methodist
Birmingham-Southern College; Birmingham, Ala. (1856).....	Guy E. Snively.....	922 C	Methodist
Bishop College; Marshall, Tex. (1881).....	M. K. Curry, Jr.....	507 C	Baptist
Black Hills Teachers College; Spearfish, S. Dak. (1883).....	Russell E. Jonas.....	556 C	State
Blackburn College; Carlinville, Ill. (1857).....	Robert P. Ludlum.....	323 C	Presbyterian <sup>4</sup>
Blue Mountain College; Blue Mountain, Miss. (1873).....	Lawrence T. Lowrey.....	262 F <sup>8</sup>	Baptist
Bluefield State College; Bluefield, W. Va. (1895).....	S. J. Wright.....	326 C	State
Bluffton College; Bluffton, Ohio (1900).....	Lloyd L. Ramseyer.....	244 C	Mennonite <sup>4</sup>
Boston College; Chestnut Hill, Mass. (1863).....	V. Rev. J. R. N. Maxwell.....	8,816 C	Catholic <sup>4</sup>
Boston University; Boston, Mass. (1839).....	Harold C. Case.....	9,634 C	Methodist <sup>4</sup>
Bowdoin College; Brunswick, Maine (1794).....	James S. Coles.....	761 M	Private
Bowling Green State University; Bowling Green, Ohio (1910).....	Ralph W. McDonald.....	3,710 C	State
Bradford Durfee Technical Institute; Fall River, Mass. (1904).....	Leslie B. Coombs.....	295 C	State
Bradley University; Peoria, Ill. (1897).....	Harold P. Rodes.....	2,402 C	Private
Brandeis University; Waltham, Mass. (1948) <sup>19</sup> .....	Abram L. Sachar.....	957 C	Private
Brenau College; Gainesville, Ga. (1878).....	Josiah Crudup.....	285 F	Private
Briar Cliff College; Sioux City, Iowa (1930).....	Sister Mary Matilda.....	275 F	Catholic <sup>4</sup>
Bridgeport, University of; Bridgeport, Conn. (1927).....	James H. Halsey.....	3,300 C	Private
Bridgewater College; Bridgewater, Va. (1880).....	Warren D. Bowman.....	442 C	Brethren <sup>4</sup>
Brigham Young University; Provo, Utah (1875).....	Ernest L. Wilkinson.....	7,920 C	Latter-day Saints
Brooklyn, Polytechnic Institute of; Brooklyn, N. Y. (1854).....	H. S. Rogers.....	5,610 M	Private
Brooklyn College. See New York, College of the City of.....			
Brown University; Providence, R. I. (1764) <sup>12</sup> .....	Barnaby C. Keeney.....	3,430 Co	Private
Bryn Mawr College; Bryn Mawr, Pa. (1885).....	Katharine E. McBride.....	800 F <sup>8</sup>	Private
Bucknell University; Lewisburg, Pa. (1845).....	Merle M. Odgers.....	1,942 C	Baptist <sup>4</sup>
Buena Vista College; Storm Lake, Iowa (1891).....	John A. Fisher.....	501 C	Presbyterian
Buffalo, University of; Buffalo, N. Y. (1846).....	Clifford C. Furnas <sup>14</sup> .....	10,174 C	Private
Butler University; Indianapolis, Ind. (1855).....	M. O. Ross.....	4,652 C	Disc. of Christ <sup>4</sup>
Caldwell College for Women; Caldwell, N. J. (1939).....	Sister M. Marguerite.....	220 F	Catholic <sup>4</sup>
California, University of; Berkeley, Calif. (1858).....	Robert G. Sproul.....	37,066 C <sup>9</sup>	State
Berkeley Campus.....	Clark Kerr <sup>14</sup> .....	16,275 C	State
Davis Campus.....	Stanley B. Freeborn <sup>18</sup> .....	1,835 C	State
Lick Observatory; Mt. Hamilton.....	C. Donald Shane <sup>17</sup> .....		State
Los Angeles Campus (UCLA).....	Raymond B. Allen <sup>14</sup> .....	14,794 C	State
Riverside Campus.....	Gordon S. Watkins <sup>18</sup> .....	648 C	State
San Francisco Campus <sup>10</sup> .....	John C. Snidecor <sup>45</sup> .....	1,911 C	State
Santa Barbara College.....	Roger R. Revelle <sup>47</sup> .....	33 C	State
Scripps Institution of Oceanography; La Jolla.....	Daniel S. Defenbacher.....	455 C	Private
California College of Arts & Crafts; Oakland, Calif. (1907).....	Lee A. DuBridge.....	984 M	Private
California Institute of Technology; Pasadena, Calif. (1891).....	Gurdon Woods <sup>47</sup> .....	171 C	Private
California School of Fine Arts; San Francisco, Calif. (1874).....	Julian A. McPhee.....	3,378 C	State
California State Polytechnic College; San Luis Obispo, Calif. (1901) <sup>38</sup> .....	William Spoelhof.....	1,493 C	Christian Ref.
Calvin College; Grand Rapids, Mich. (1876).....	V. Rev. P. E. Dobson.....	1,380 M <sup>6</sup>	Catholic <sup>4</sup>
Canisius College; Buffalo, N. Y. (1870).....	Harold L. Yochum.....	1,193 C	Lutheran
Capital University; Columbus, Ohio (1850).....	Sister Mary Aquin.....	134 F	Catholic <sup>4</sup>
Cardinal Stritch College; Milwaukee, Wis. (1937).....	Laurence M. Gould.....	893 C	(15)
Carleton College; Northfield, Minn. (1866).....	John C. Warner.....	3,040 C	Private
Carnegie Institute of Technology; Pittsburgh, Pa. (1900).....	V. Rev. R. V. Kavanagh.....	525 C	Catholic
Carroll College; Helena, Mont. (1910).....	Robert D. Steele.....	680 C	Presbyterian <sup>4</sup>
Carroll College; Waukesha, Wis. (1846).....	Harley Fite.....	1,203 C	Baptist
Carson-Newman College; Jefferson City, Tenn. (1851).....			

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Carthage College; Carthage, Ill. (1870).....	Harold H. Lentz.....	435 C	Lutheran
Cascade College; Portland, Oreg. (1918).....	Edison Habegger.....	215 C	Private
Case Institute of Technology; Cleveland, Ohio (1880).....	T. Keith Glennan.....	2,062 M <sup>4</sup>	Private
Catawba College; Salisbury, N. C. (1851).....	A. R. Keppel.....	646 C	Evan. & Ref. <sup>4</sup>
Catholic University of America; Washington, D. C. (1887).....	Most Rev. B. J. McEntegart.....	3,349 C	Catholic
Cedar Crest College; Allentown, Pa. (1867).....	Dale H. Moore.....	422 F	Evan. & Ref. <sup>4</sup>
Centenary College of Louisiana; Shreveport, La. (1825).....	Joe J. Mickle.....	1,635 C	Methodist
Central College; Fayette, Mo. (1854).....	Ralph L. Woodward.....	570 C	Methodist
Central College; Pella, Iowa (1853).....	G. T. Vander Lugt.....	425 C	Reformed <sup>4</sup>
Central Michigan College; Mt. Pleasant, Mich. (1892).....	Charles L. Anspach.....	2,947 C	State
Central Missouri State College; Warrensburg, Mo. (1871).....	G. W. Diemer.....	1,989 C	State
Central State College; Edmond, Okla. (1890).....	W. Max Chambers.....	1,837 C	State
Central State College; Wilberforce, Ohio (1887).....	Charles H. Wesley.....	1,068 C	State
Central Washington College of Education; Ellensburg, Wash. (1891).....	Robert E. McConnell.....	1,478 C	State
Centre College of Kentucky; Danville, Ky. (1819).....	Walter A. Groves.....	420 C	Presbyterian
Charleston, College of; Charleston, S. C. (1770).....	George D. Grice.....	246 C	Private
Chatham College; Pittsburgh, Pa. (1869).....	Paul R. Anderson.....	427 F	Private
Chattanooga, University of; Chattanooga, Tenn. (1886).....	David A. Lockmiller.....	1,225 C	Methodist <sup>4</sup>
Chestnut Hill College; Philadelphia, Pa. (1871).....	Sister Catharine Frances.....	426 F	Catholic
Chicago, School of the Art Institute of; Chicago, Ill. (1879).....	Everett D. Graff.....	961 C	Private
Chicago, University of; Chicago, Ill. (1890).....	Lawrence A. Kimpton <sup>14</sup> .....	6,048 C	Private
Chicago Teachers College; Chicago, Ill. (1869).....	Raymond M. Cook <sup>17</sup> .....	2,572 C	City
Chico State College; Chico, Calif. (1887).....	Glenn Kendall.....	1,849 C	State
Cincinnati, University of; Cincinnati, Ohio (1819).....	Walter C. Langsam.....	12,274 C	City
Citadel, The; Military College of S. C.; Charleston, S. C. (1842).....	Gen. Mark W. Clark.....	1,850 M	State
City College. See New York, College of the City of.....			
Claremont College; Claremont, Calif. (1925).....	George C. S. Benson <sup>18</sup> .....	194 C	Private
Claremont Men's College; Claremont, Calif. (1947).....	George C. S. Benson.....	350 M	Private
Clark College; Atlanta, Ga. (1869) <sup>14</sup> .....	James P. Brawley.....	634 C	Methodist
Clark University; Worcester, Mass. (1887).....	Howard B. Jefferson.....	815 Co	Private
Clarke College; Dubuque, Iowa (1843).....	Sister M. A. Leone.....	450 F	Catholic <sup>4</sup>
Clarkson College of Technology; Potsdam, N. Y. (1896).....	William G. Van Note.....	1,122 M	Private
Clemson Agricultural College; Clemson, S. C. (1889).....	Robert F. Poole.....	2,937 C	State
Coe College; Cedar Rapids, Iowa (1851).....	Howell H. Brooks.....	769 C	Presbyterian <sup>4</sup>
Coker College; Hartsville, S. C. (1908).....	J. A. Barry, Jr.....	246 F <sup>8</sup>	Private
Colby College; Waterville, Maine (1813).....	Julius S. Bixler.....	1,000 C	Private
Colgate University; Hamilton, N. Y. (1819).....	Everett Case.....	1,305 M	Private
Colorado, University of; Boulder & Denver Colo. (1876).....	Ward Darley.....	9,354 C	State
Colorado A & M College; Fort Collins, Colo. (1870).....	William E. Morgan.....	4,025 C	State
Colorado College; Colorado Springs, Colo. (1874).....	Louis T. Benezet.....	975 C	Private
Colorado School of Mines; Golden, Colo. (1874).....	John W. Vanderwill.....	964 C	State
Colorado State College of Education; Greeley, Colo. (1890).....	William R. Ross.....	2,496 C	State
Columbia College; Columbia, S. C. (1854).....	R. Wright Spears.....	501 F	Methodist
Columbia University; New York, N. Y. (1754) <sup>17</sup> .....	Grayson Kirk.....	25,246 C	Private
Concord College; Athens, W. Va. (1872).....	Virgil H. Stewart.....	989 C	State
Concordia College; Moorhead, Minn. (1891).....	Joseph L. Knutson.....	1,323 C	Lutheran
Concordia Teachers College; River Forest, Ill. (1864).....	Rev. Martin L. Koehneke.....	641 C	Lutheran
Concordia Teachers College; Seward, Nebr. (1894).....	Paul A. Zimmerman.....	401 C	Lutheran
Connecticut, University of; Storrs, Conn. (1881).....	A. N. Jorgensen.....	9,167 C	State
Connecticut College for Women; New London, Conn. (1911).....	Rosemary Park.....	850 F	Private
Connecticut State Teachers College; Danbury, Conn. (1904).....	Ruth A. Haas.....	481 C	State
Connecticut State Teachers College; New Britain, Conn. (1849).....	Herbert D. Welte.....	1,249 C	State
Connecticut State Teachers College; New Haven, Conn. (1893).....	Hilton C. Buley.....	1,988 C	State
Connecticut State Teachers College; Willimantic, Conn. (1889).....	J. Eugene Smith.....	267 C	State
Converse College; Spartanburg, S. C. (1889).....	Elford C. Morgan.....	323 F <sup>8</sup>	Private
Cooper Union; New York, N. Y. (1859).....	Edwin S. Burdell.....	1,207 C	Private
Coppin State Teachers College; Baltimore, Md. (1900).....	Miles W. Connor.....	300 C	State
Cornell College; Mount Vernon, Iowa (1853).....	Russell D. Cole.....	684 C	Methodist <sup>4</sup>
Cornell University; Ithaca, N. Y. (1865) <sup>16</sup> .....	Deane W. Malott.....	9,968 C	Private & State
Creighton University; Omaha, Nebr. (1878).....	V. Rev. Carl M. Reinert.....	2,488 C	Catholic <sup>4</sup>
Culver-Stockton College; Canton, Mo. (1853).....	Fred Helsabeck.....	303 C	Disc. of Christ <sup>4</sup>
Dakota Wesleyan University; Mitchell, S. Dak. (1885).....	Matthew D. Smith.....	470 C	Methodist <sup>4</sup>
Dartmouth College; Hanover, N. H. (1770).....	John S. Dickey.....	2,955 M	Private
David Lipscomb College; Nashville, Tenn. (1891).....	Athens Clay Pullias.....	790 C	Ch. of Christ <sup>4</sup>
Davidson College; Davidson, N. C. (1837).....	John R. Cunningham.....	863 M	Presbyterian
Davis & Elkins College; Elkins, W. Va. (1903).....	David K. Allen.....	568 C	Presbyterian
Dayton, University of; Dayton, Ohio (1882).....	V. Rev. A. L. Seebold.....	4,335 C	Catholic <sup>4</sup>
Delaware, University of; Newark, Del. (1833).....	John A. Perkins.....	2,727 C	State
Delaware State College; Dover, Del. (1891).....	Jerome H. Holland.....	235 C	State
Delta State College; Cleveland, Miss. (1924) <sup>16</sup> .....	William M. Kethley.....	471 C	State
Denison University; Granville, Ohio (1831).....	A. Blair Knapp.....	1,289 C	Baptist <sup>4</sup>

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Denver, University of; Denver, Colo. (1864).....	Chester M. Alter <sup>14</sup> .....	4,456 C	Methodist <sup>4</sup>
De Paul University; Chicago, Ill. (1898).....	V. Rev. C. J. O'Malley.....	6,658 C	Catholic
DePauw University; Greencastle, Ind. (1837).....	Russell J. Humbert.....	1,882 C	Methodist <sup>4</sup>
Detroit, University of; Detroit, Mich. (1877).....	Rev. Celestin J. Steiner.....	8,579 C	Catholic <sup>4</sup>
Dickinson College; Carlisle, Pa. (1773).....	William W. Edell.....	871 C	Methodist <sup>4</sup>
Dillard University; New Orleans, La. (1930).....	Albert W. Dent.....	768 C	Cg.-Chr. & Meth. <sup>4</sup>
District of Columbia Teachers College; Washington, D. C. (1955) <sup>17</sup>	Walter E. Hager.....	1,010 C	City
Doane College; Crete, Nebr. (1872).....	Donald M. Typer.....	314 C	Congregational <sup>4</sup>
Dominican College of San Rafael; San Rafael, Calif. (1890).....	Sister M. Patrick.....	355 F <sup>8</sup>	Catholic <sup>4</sup>
Douglass College; New Brunswick, N. J. (1918) <sup>26</sup>	Mary I. Bunting <sup>17</sup> .....	1,190 F	State
Drake University; Des Moines, Iowa (1881).....	Henry G. Harmon.....	5,171 C	Disc. of Christ <sup>4</sup>
Drew University; Madison, N. J. (1867).....	Fred G. Holloway.....	742 C	Methodist <sup>4</sup>
Drexel Institute of Technology; Philadelphia, Pa. (1891).....	James Creese.....	7,290 C	Private
Dropsie College; Philadelphia, Pa. (1907).....	Abraham A. Neuman.....	110 C	Private
Drury College; Springfield, Mo. (1873).....	J. F. Findlay.....	706 C	Congregational <sup>4</sup>
Dubuque, University of; Dubuque, Iowa (1852).....	Gaylord M. Couchman.....	471 C	Presbyterian <sup>4</sup>
Duchesne College of the Sacred Heart; Omaha, Nebr. (1881).....	Mother J. Kimball.....	235 F	Catholic <sup>4</sup>
Duke University; Durham, N. C. (1838).....	A. Hollis Edens.....	4,770 C	Private
Dunbarton College of Holy Cross; Washington, D. C. (1935).....	Sister M. M. Dolores.....	205 F	Catholic <sup>4</sup>
Duquesne University; Pittsburgh, Pa. (1878).....	V. Rev. V. F. Gallagher.....	4,002 C	Catholic <sup>4</sup>
D'Youville College; Buffalo, N. Y. (1908).....	Sister Regina Marie.....	500 F	Catholic <sup>4</sup>
Earlham College; Richmond, Ind. (1847).....	Thomas E. Jones.....	706 C	Quaker
East Carolina College; Greenville, N. C. (1907).....	John D. Messick.....	2,674 C	State
East Central State College; Ada, Okla. (1909).....	Charles F. Spencer.....	1,399 C	State
East Tennessee State College; Johnson City, Tenn. (1911).....	Burgin E. Dossett.....	3,038 C	State
East Texas State Teachers College; Commerce, Tex. (1894).....	James G. Gee.....	2,057 C	State
Eastern Baptist College; St. Davids, Pa. (1932).....	Gilbert L. Guffin.....	205 C	Baptist <sup>4</sup>
Eastern Baptist Theological Seminary, The; Philadelphia, Pa. (1925).....	Gilbert L. Guffin.....	185 C	Baptist <sup>4</sup>
Eastern Illinois State College; Charleston, Ill. (1895).....	Robert G. Buzzard.....	1,840 C	State
Eastern Kentucky State College; Richmond, Ky. (1906).....	W. F. O'Donnell.....	2,249 C	State
Eastern Michigan College; Ypsilanti, Mich. (1849) <sup>58</sup>	Eugene B. Elliott.....	3,422 C	State
Eastern Montana College of Education; Billings, Mont. (1925).....	A. G. Peterson.....	723 C	State
Eastern Nazarene College; Quincy, Mass. (1918).....	Edward S. Mann.....	470 C	Nazarene
Eastern New Mexico University; Portales, N. Mex. (1934).....	Floyd D. Golden.....	1,227 C	State
Eastern Oregon College of Education; La Grande, Oreg. (1929) <sup>54</sup>	Frank B. Bennett.....	593 C	State
Eastern Washington College of Education; Cheney, Wash. (1890).....	Don S. Patterson.....	1,233 C	State
Elizabethtown College; Elizabethtown, Pa. (1899).....	A. C. Baugher.....	451 C	Brethren <sup>4</sup>
Elmhurst College; Elmhurst, Ill. (1871).....	H. W. Dinkmeyer.....	774 C	Evan. & Ref. <sup>4</sup>
Elmira College; Elmira, N. Y. (1855).....	J. Ralph Murray.....	380 F <sup>8</sup>	Private
Elon College; Elon College, N. C. (1889).....	Leon E. Smith.....	1,170 C	Cong. Christian <sup>4</sup>
Emerson College; Boston, Mass. (1880).....	S. Justus McKinley.....	340 C	Private
Emmanuel College; Boston, Mass. (1919).....	Sister Alice Gertrude.....	617 F	Catholic
Emmanuel Missionary College; Berrien Springs, Mich. (1874).....	F. O. Rittenhouse.....	795 C	7th Day Adven.
Emory & Henry College; Emory, Va. (1836).....	Foye G. Gibson.....	486 C	Methodist
Emory University; Atlanta, Ga. (1836).....	Goodrich C. White.....	3,249 C	Methodist
Emporia, The College of; Emporia, Kans. (1882) <sup>10</sup>	Luther E. Sharpe.....	206 C	Presbyterian
Erskine College; Due West, S. C. (1839).....	J. Mauldin Lesesne.....	360 C	Presbyterian
Evansville College; Evansville, Ind. (1854).....	Melvin W. Hyde.....	1,090 C	Methodist <sup>4</sup>
Fairfield University; Fairfield, Conn. (1942).....	V. Rev. J. D. Fitzgerald.....	1,116 M <sup>6</sup>	Catholic
Fairleigh Dickinson College; Rutherford & Teaneck, N. J. (1941).....	Peter Sammartino.....	6,755 C	Private <sup>20</sup>
Fairmont State College; Fairmont, W. Va. (1867).....	John W. Pence.....	1,122 C	State
Fenn College; Cleveland, Ohio (1881).....	G. Brooks Earnest.....	1,964 C	Private
Ferris Institute; Big Rapids; Mich. (1884).....	Victor F. Spathelf.....	1,431 C	State
Fisk University; Nashville, Tenn. (1866) <sup>19</sup>	Charles S. Johnson.....	779 C	Private
Flora Macdonald College; Red Springs, N. C. (1896).....	Marshall S. Woodson.....	343 F <sup>8</sup>	Presbyterian
Florida, University of; Gainesville, Fla. (1853).....	J. Wayne Reitz.....	9,917 C	State
Florida A & M University; Tallahassee, Fla. (1887).....	George W. Gore, Jr.....	2,649 C	State
Florida Nor. & Ind. Memorial College; St. Augustine (1892).....	R. W. Puryear.....	282 C	Baptist <sup>4</sup>
Florida Southern College; Lakeland, Fla. (1885) <sup>54</sup>	Ludd M. Spivey.....	1,936 C	Methodist
Florida State University; Tallahassee, Fla. (1881).....	Doak S. Campbell.....	6,190 C	State
Fontbonne College; St. Louis, Mo. (1923) <sup>60</sup>	Sister S. M. Vachon.....	575 F	Catholic
Fordham University; New York, N. Y. (1841).....	Rev. Laurence J. McGinley.....	9,488 C	Catholic
Fort Hays Kansas State College; Hays, Kans. (1901).....	M. C. Cunningham.....	1,943 C	State
Fort Valley State College; Fort Valley, Ga. (1895).....	C. V. Troup.....	721 C	State
Franklin & Marshall College; Lancaster, Pa. (1787).....	William Webster Hall.....	1,140 M	Evan. & Ref. <sup>4</sup>
Franklin College; Franklin, Ind. (1834).....	Harold W. Richardson.....	476 C	Baptist <sup>4</sup>
Fresno State College; Fresno, Calif. (1911) <sup>5</sup>	Arnold E. Joyal.....	4,072 C	State
Friends University; Wichita, Kans. (1898).....	Lloyd S. Cressman.....	625 C	Quaker
Furman University; Greenville, S. C. (1826).....	John L. Plyler.....	1,260 C	Baptist
Gannon College; Erie, Pa. (1944).....	Joseph J. Wehrle.....	1,210 M	Catholic
Gen. Assembly's Trn'g Sch. for Lay Workers; Richmond, Va. (1914).....	Rev. C. E. S. Kraemer.....	109 C	Presbyterian



Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
General Beadle State Teachers College; Madison, S. Dak. (1851).	V. A. Lowry.....	283 C	State
Geneva College; Beaver Falls, Pa. (1848).	Charles M. Lee.....	809 C	Presbyterian
George Peabody College for Teachers; Nashville, Tenn. (1875).	Henry H. Hill.....	1,597 C	Private
George Pepperdine College; Los Angeles, Calif. (1937).	Hugh M. Tiner.....	989 C	Private
George Washington University; Washington, D. C. (1821).	Cloyd H. Marvin.....	6,873 C	Private
George Williams College; Chicago, Ill. (1890).	John R. McCurdy.....	267 C	Private
Georgetown College; Georgetown, Ky. (1798).	H. Leo Eddleman.....	1,040 C	Baptist
Georgetown University; Washington, D. C. (1789).	V. Rev. Edward B. Bunn.....	5,701 M <sup>6</sup>	Catholic <sup>4</sup>
Georgia, Medical College of; Augusta, Ga. (1828).	Edgar R. Pund.....	353 C	State
Georgia, University of; Athens, Ga. (1785).	O. C. Aderhold.....	4,910 C	State
Georgia Institute of Technology; Atlanta, Ga. (1885).	Paul Weber <sup>10</sup> .....	4,630 C	State
Georgia State College for Women; Milledgeville, Ga. (1889).	Henry K. Stanford.....	550 F	State
Georgia Teachers College; Collegeboro, Ga. (1929).	Zach S. Henderson.....	733 C	State
Georgian Court College; Lakewood, N. J. (1908).	Mother Marie Anna.....	250 F	Catholic <sup>4</sup>
Gettysburg College; Gettysburg, Pa. (1832).	John S. Rice <sup>69</sup> .....	1,321 C	Lutheran
Glenville State College; Glenville, W. Va. (1872).	Harry B. Heflin.....	581 C	State
Golden Gate College; San Francisco, Calif. (1901).	Nagel T. Miner.....	1,633 C	Private
Gonzaga University; Spokane, Wash. (1887).	Francis E. Corkery.....	1,390 C	Catholic
Good Counsel College; White Plains, N. Y. (1923).	Mother Mary Dolores.....	279 F	Catholic <sup>4</sup>
Goshen College; Goshen, Ind. (1903).	Paul Mininger.....	814 C	Mennonite
Goucher College; Baltimore, Md. (1885).	Otto F. Kraushaar.....	649 F	Private
Grambling College; Grambling, La. (1901).	R. W. E. Jones.....	2,036 C	State
Great Falls, College of; Great Falls, Mont. (1932).	Msgr. James J. Donovan.....	572 C	Catholic
Greensboro College; Greensboro, N. C. (1838).	Harold H. Hutson.....	329 C <sup>60</sup>	Methodist
Greenville College; Greenville, Ill. (1892).	H. J. Long.....	501 C	Methodist
Grinnell College; Grinnell, Iowa (1846).	Howard R. Bowen.....	807 C	Cg.-Chr. & Epis. <sup>4</sup>
Grove City College; Grove City, Pa. (1876).	Weir C. Kettler.....	1,200 C	Presbyterian <sup>4</sup>
Guilford College; Guilford College, N. C. (1837).	Clyde A. Milner.....	647 C	Quaker <sup>4</sup>
Gustavus Adolphus College; St. Peter, Minn. (1862).	Edgar M. Carlson.....	950 C	Lutheran
Hamilton College; Clinton, N. Y. (1812).	Robert W. McEwen.....	625 M	Private
Hamline University; St. Paul, Minn. (1854).	Paul H. Giddens.....	947 C	Methodist <sup>4</sup>
Hampden-Sydney College; Hampden-Sydney, Va. (1776).	Joseph Clarke Robert.....	365 M	Presbyterian
Hampton Institute; Hampton, Va. (1868).	Alonzo G. Moron.....	1,176 C	Private
Hanover College; Hanover, Ind. (1827).	Albert G. Parker, Jr.....	679 C	Presbyterian <sup>4</sup>
Hardin-Simmons University; Abilene, Tex. (1891).	Evan A. Reiff.....	1,392 C	Baptist
Harding College; Searcy, Ark. (1919).	George S. Benson.....	795 C	Ch. of Christ
Harpur College. See New York, State University of.			
Harris Teachers College; St. Louis, Mo. (1857).	Charles A. Naylor.....	907 C	City & State
Hartt College of Music; Hartford, Conn. (1920).	Moshe Paranov.....	137 C	Private
Hartwick College; Oneonta, N. Y. (1928).	M. A. F. Ritchie.....	455 C	Lutheran <sup>4</sup>
Harvard University; Cambridge, Mass. (1636).	Nathan M. Pusey.....	10,364 M <sup>6</sup>	Private
Hastings College; Hastings, Nebr. (1882).	Dale D. Welch.....	674 C	Presbyterian <sup>4</sup>
Haverford College; Haverford, Pa. (1833).	Archibald MacIntosh <sup>18</sup> .....	450 M	Private
Hawaii, University of; Honolulu, Hawaii (1907).	Paul S. Bachman.....	4,313 C	Territory
Heidelberg College; Tiffin, Ohio (1850).	Terry Wickham.....	577 C	Evan. & Ref. <sup>4</sup>
Henderson State Teachers College; Arkadelphia, Ark. (1890).	D. D. McBrien.....	1,093 C	State
Hendrix College; Conway, Ark. (1884).	Matt L. Ellis.....	411 C	Methodist
High Point College; High Point, N. C. (1922).	Dennis H. Cooke.....	900 C	Methodist <sup>4</sup>
Hillsdale College; Hillsdale, Mich. (1844).	J. Donald Phillips.....	597 C	Baptist <sup>4</sup>
Hiram College; Hiram, Ohio (1850).	Paul H. Fall.....	556 C	Disc. of Christ <sup>4</sup>
Hobart & William Smith Colleges; Geneva, N. Y. (1822).	H. N. Hubbs <sup>13</sup> .....	915 C <sup>61</sup>	Episcopal <sup>4</sup>
Hofstra College; Hempstead, N. Y. (1939).	John C. Adams.....	4,030 C	Private
Hollins College; Hollins College, Va. (1842).	John R. Everett.....	555 F	Private
Holy Cross, College of the; Worcester, Mass. (1843).	V. Rev. W. A. Donaghy.....	1,769 M	Catholic <sup>4</sup>
Holy Names, College of the; Oakland, Calif. (1868).	Sister Imelda Maria.....	419 F	Catholic <sup>4</sup>
Holy Names College; Spokane, Wash. (1907).	Sister Marian Raphael.....	200 F	Catholic <sup>4</sup>
Hood College; Frederick, Md. (1893).	Andrew G. Truxal.....	451 F	Evan. & Ref. <sup>4</sup>
Hope College; Holland, Mich. (1851).	Irwin J. Lubbers.....	1,016 C	Reformed
Houghton College; Houghton, N. Y. (1883).	Stephen W. Paine.....	588 C	Methodist
Houston, University of; Houston, Tex. (1927).	Lt. Gen. A. D. Bruce.....	12,239 C	( <sup>62</sup> )
Howard College; Birmingham, Ala. (1842).	Harwell G. Davis.....	1,440 C	Baptist
Howard University; Washington, D. C. (1867) <sup>64</sup> .	Mordecai W. Johnson.....	3,333 C	Private
Humboldt State College; Arcata, Calif. (1914).	Cornelius H. Siemens.....	1,192 C	State
I Hunter College. See New York, College of the City of.			
Ironton College; Montgomery, Ala. (1854).	Hubert Searcy.....	557 C	Methodist <sup>4</sup>
Iuron College; Huron, S. Dak. (1883).	Daniel E. Kerr.....	330 C	Presbyterian
Iuston-Tillotson College; Austin, Tex. (1952).	J. J. Seabrook.....	443 C	Cong. & Meth.
Idaho, College of; Caldwell, Idaho (1891).	Tom E. Shearer.....	537 C	Presbyterian <sup>4</sup>
Idaho, University of; Moscow, Idaho (1889).	D. R. Theophilus.....	3,481 C	State
Idaho State College; Pocatello, Idaho (1901).	Carl W. McIntosh.....	1,707 C	State
Illinois, University of; Urbana-Champaign & Chicago, Ill. (1867).	David D. Henry.....	22,161 C	State

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Illinois College; Jacksonville, Ill. (1829).....	L. Vernon Caine.....	303 C	Cong. & Presb. <sup>4</sup>
Illinois Institute of Technology; Chicago, Ill. (1892).....	John T. Rettaliata.....	6,923 C	Private
Illinois State Normal University; Normal, Ill. (1857).....	Robert G. Bone.....	2,838 C	State
Illinois Wesleyan University; Bloomington, Ill. (1850).....	Merrill J. Holmes.....	955 C	Methodist <sup>4</sup>
Immaculata College; Immaculata, Pa. (1920).....	Sister Mary of Lourdes.....	473 F	Catholic
Immaculate Heart College; Los Angeles, Calif. (1916).....	Sister Mary Thecla.....	804 F <sup>8</sup>	Catholic <sup>4</sup>
Incarnate Word College; San Antonio, Tex. (1881).....	Sister M. Columkille.....	736 F <sup>8</sup>	Catholic <sup>4</sup>
Indiana Central College; Indianapolis, Ind. (1902).....	I. Lynd Esch.....	497 C	Evan. Un. Breth.
Indiana State Teachers College; Terre Haute, Ind. (1870).....	Raleigh W. Holmstedt.....	2,630 C	State
Indiana University; Bloomington & Indianapolis Ind. (1820).....	H. B. Wells.....	19,874 C	State
Iona College; New Rochelle, N. Y. (1940).....	Brother W. H. Barnes.....	2,170 M	Catholic <sup>4</sup>
Iowa, State University of; Iowa City, Iowa (1847).....	Virgil M. Hancher.....	9,029 C	State
Iowa State College of A & M Arts; Ames, Iowa (1858).....	James H. Hilton.....	8,834 C	State
Iowa State Teachers College; Cedar Falls, Iowa (1876) <sup>54</sup> .....	J. W. Maucker.....	2,099 C	State
Iowa Wesleyan College; Mount Pleasant, Iowa (1842).....	J. Raymond Chadwick.....	392 C	Methodist
Ithaca College; Ithaca, N. Y. (1892).....	Leonard B. Job.....	1,169 C	Private
Jackson College; Medford, Mass. (1910) <sup>44</sup> .....	Katharine R. Jeffers <sup>17</sup> .....	490 F	Private
Jackson State College; Jackson, Miss. (1877).....	Jacob L. Reddix.....	964 C	State
Jamestown College; Jamestown, N. Dak. (1883).....	Edwin H. Rian.....	410 C	Presbyterian <sup>4</sup>
Jarvis Christian College; Hawkins, Tex. (1912).....	Cleo W. Blackburn.....	200 C	Disc. of Christ
Jewish Theological Seminary of America; New York, N. Y. (1887).....	Louis Finkelstein <sup>14</sup> .....	485 C <sup>63</sup>	Jewish <sup>4</sup>
John Carroll University; Cleveland, Ohio (1886).....	V. Rev. F. E. Welfle.....	1,692 M <sup>6</sup>	Catholic <sup>4</sup>
Johns Hopkins University; Baltimore, Md. (1876).....	Milton S. Eisenhower.....	4,724 M <sup>6</sup>	Private
Johnson C. Smith University; Charlotte, N. C. (1867).....	Hardy Liston.....	596 C	Presbyterian <sup>4</sup>
Judson College; Marion, Ala. (1838).....	J. I. Riddle.....	262 F	Baptist
Juniata College; Huntingdon, Pa. (1876).....	Calvert N. Ellis.....	636 C	Brethren <sup>4</sup>
Kalamazoo College; Kalamazoo, Mich. (1833).....	Weimer K. Hicks.....	530 C	Baptist <sup>4</sup>
Kansas, University of; Lawrence & Kansas City, Kans. (1865).....	Franklin D. Murphy <sup>14</sup> .....	7,661 C	State
Kansas City, University of; Kansas City, Mo. (1929).....	Earl J. McGrath.....	3,456 C	Private
Kansas State College of Agr. & App. Sci.; Manhattan, Kans. (1863).....	James A. McCain.....	5,516 C	State
Kansas State Teachers College; Emporia, Kans. (1863).....	John E. King.....	2,059 C	State
Kansas State Teachers College; Pittsburg, Kans. (1903).....	Rees H. Hughes.....	2,433 C	State
Kent State University; Kent, Ohio (1910) <sup>8</sup> .....	George A. Bowman.....	5,914 C	State
Kentucky, University of; Lexington, Ky. (1865).....	H. L. Donovan.....	6,487 C	State
Kentucky State College; Frankfort, Ky. (1886).....	Rufus B. Atwood.....	432 C	State
Kentucky Wesleyan College; Owensboro, Ky. (1860).....	Oscar W. Lever.....	559 C	Methodist <sup>4</sup>
Kenyon College; Gambier, Ohio (1824).....	Gordon K. Chalmers.....	504 M	Episcopal <sup>4</sup>
Keuka College; Keuka Park, N. Y. (1890).....	Katherine G. Blyley.....	350 F	Baptist <sup>4</sup>
King College; Bristol, Tenn. (1866).....	R. T. L. Liston.....	202 C	Presbyterian
King's College; Wilkes-Barre, Pa. (1946).....	Rev. George P. Benaglia.....	775 M	Catholic
Knox College; Galesburg, Ill. (1837).....	Sharvy G. Umbeck.....	739 C	Private
Knoxville College; Knoxville, Tenn. (1875).....	James A. Colston.....	468 C	Presbyterian
Lafayette College; Easton, Pa. (1826).....	Ralph C. Thrichison.....	1,483 M	Presbyterian <sup>4</sup>
La Grange College; La Grange, Ga. (1831).....	Weights G. Henry, Jr.....	300 C	Methodist
Lake Erie College; Painesville, Ohio (1856).....	Paul Weaver.....	325 F	Private
Lake Forest College; Lake Forest, Ill. (1857).....	Ernest A. Johnson.....	671 C	Presbyterian <sup>4</sup>
Lamar State College of Technology; Beaumont, Tex. (1923).....	F. L. McDonald.....	4,403 C	State
Lambeth College; Jackson, Tenn. (1843).....	Luther L. Gobbel.....	318 C	Methodist
Lander College; Greenwood, S. C. (1872).....	B. M. Grier.....	276 C	County
Lane College; Jackson, Tenn. (1882).....	C. A. Kirkendoll.....	370 C	Colored M.E.
Langston University; Langston, Okla. (1897).....	G. L. Harrison.....	725 C	State
La Salle College; Philadelphia, Pa. (1863).....	Brother E. Stanislaus.....	2,899 M	Catholic
La Sierra College; Arlington, Calif. (1922).....	Norval F. Pease.....	736 C	7th Day Adven.
La Verne College; La Verne, Calif. (1891).....	Harold D. Fasnacht.....	339 C	Brethren
Lawrence College; Appleton, Wis. (1847).....	Douglas M. Knight.....	763 C	Methodist <sup>4</sup>
Lebanon Valley College; Annville, Pa. (1866).....	F. K. Miller.....	549 C	Evan. Un. Breth.
Lehigh University; Bethlehem, Pa. (1865).....	Martin D. Whitaker.....	3,094 M	Private
LeMoyne College; Memphis, Tenn. (1870).....	Hollis F. Price.....	410 C	Congregational <sup>4</sup>
Le Moyne College; Syracuse, N. Y. (1946).....	V. Rev. Robert F. Grewen.....	1,083 C	Catholic
Lenoir Rhine College; Hickory, N. C. (1891).....	Voigt R. Cromer.....	877 C	Lutheran
Lesley College; Cambridge, Mass. (1909).....	Trentwell M. White.....	391 F <sup>8</sup>	Private
Lewis & Clark College; Portland, Oreg. (1867).....	Morgan S. Odell.....	1,018 C	Presbyterian <sup>4</sup>
Limestone College; Gaffney, S. C. (1845).....	A. J. Eastwood.....	269 F	Private
Lincoln Memorial University; Harrogate, Tenn. (1897).....	Robert L. Kincaid.....	484 C	Private
Lincoln University; Jefferson City, Mo. (1866).....	Earl E. Dawson.....	758 C	State
Lincoln University; Lincoln University, Pa. (1854).....	Horace M. Bond.....	302 M <sup>6</sup>	Private <sup>64</sup>
Lindenwood College; St. Charles, Mo. (1827).....	F. L. McCluer.....	350 F	Presbyterian
Linfield College; McMinnville, Oreg. (1848).....	Harry L. Dillin.....	581 C	Baptist <sup>4</sup>
Livingstone College; Salisbury, N. C. (1879).....	William J. Trent.....	455 C	A. M. E. Zion
Long Beach State College; Long Beach, Calif. (1949).....	P. Victor Peterson.....	5,700 C	State
Long Island University; Brooklyn, N. Y. (1926).....	Adm. R. L. Conolly.....	1,591 C	Private

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Longwood College; Farmville, Va. (1884).....	Francis G. Lankford, Jr.	820 F <sup>8</sup>	State
Loras College; Dubuque, Iowa (1839).....	M. Rev. Loras T. Lane.....	1,057 M	Catholic
Loretto Heights College; Loretto, Colo. (1891).....	Sister Frances Marie.....	745 F	Catholic <sup>4</sup>
Los Angeles City College; Los Angeles, Calif. (1927).....	John Lombardi <sup>47</sup> .....	13,011 C	City
Los Angeles St. Coll. of App. Arts & Sciences; Los Angeles (1947).....	Howard S. McDonald.....	6,535 C	State
Louisiana College; Pineville, La. (1936).....	G. Earl Guinn.....	633 C	Baptist
Louisiana Polytechnic Institute; Ruston, La. (1894).....	R. L. Ropp.....	2,548 C	State
Louisiana State University; Baton Rouge, La. (1860).....	Troy H. Middleton.....	8,359 C	State
Louisville, University of; Louisville, Ky. (1798).....	Philip G. Davidson.....	4,577 C	City
Lowell Technological Institute; Lowell, Mass. (1897).....	Martin J. Lydon.....	727 C	State
Loyola College; Baltimore, Md. (1852).....	V. Rev. Vincent F. Beatty.....	1,336 C <sup>22</sup>	Catholic <sup>4</sup>
Loyola University; Chicago, Ill. (1870).....	V. Rev. James F. Maguire.....	8,293 C	Catholic <sup>4</sup>
Loyola University; Los Angeles, Calif. (1911).....	Charles S. Casassa.....	1,275 M <sup>8</sup>	Catholic
Loyola University; New Orleans, La. (1904).....	V. Rev. W. P. Donnelly.....	2,596 C	Catholic <sup>4</sup>
Luther College; Decorah, Iowa (1861).....	J. W. Ylvisaker.....	1,012 C	Lutheran <sup>4</sup>
Lycoming College; Williamsport, Pa. (1812).....	D. Frederick Wertz.....	743 C	Methodist
Lynchburg College; Lynchburg, Va. (1903).....	Orville W. Wake.....	619 C	Disc. of Christ <sup>4</sup>
Macalester College; St. Paul, Minn. (1885).....	Charles J. Turck.....	1,209 C	Presbyterian <sup>4</sup>
MacMurray College; Jacksonville, Ill. (1846).....	Louis W. Norris.....	496 F <sup>8</sup>	Methodist <sup>4</sup>
Madison College; Harrisonburg, Va. (1908).....	G. Tyler Miller.....	1,053 F <sup>8</sup>	State
Maine, University of; Orono, Maine (1865).....	Arthur A. Hauck.....	3,258 C	State
Maine Maritime Academy; Castine, Maine (1941).....	W. W. Warlick <sup>28</sup> .....	198 M	State
Maine State Teachers College; Farmington, Me. (1864).....	Ermo H. Scott.....	337 C	State
Maine State Teachers College; Gorham, Maine (1878).....	Francis Bailey.....	582 C	State
Manchester College; North Manchester, Ind. (1889).....	A. Blair Helman.....	897 C	Brethren
Manhattan College; New York, N. Y. (1853).....	Brother A. Philip.....	2,720 M <sup>8</sup>	Catholic <sup>4</sup>
Manhattanville College of the Sacred Heart; Purchase, N. Y. (1841).....	Eleanor M. O'Byrne.....	549 F <sup>8</sup>	Private
Marietta College; Marietta, Ohio (1835).....	W. Bay Irvine.....	791 C	Congregational <sup>4</sup>
Marquette University; Milwaukee, Wis. (1881).....	V. Rev. E. J. O'Donnell.....	8,602 C	Catholic
Marshall College; Huntington, W. Va. (1837).....	Stewart H. Smith.....	3,105 C	State
Mary Baldwin College; Staunton, Va. (1842).....	Charles W. McKenzie.....	267 F	Presbyterian <sup>4</sup>
Mary Hardin-Baylor College; Belton, Tex. (1845).....	Arthur Tyson.....	623 F	Baptist
Mary Manse College; Toledo, Ohio (1922).....	Sister J. B. Macelwane.....	434 F	Catholic
Mary Washington College; Fredericksburg, Va. (1908) <sup>28</sup> .....	Grellet C. Simpson <sup>14</sup> .....	1,549 F	State
Marycrest College; Davenport, Iowa (1939).....	Mother M. G. Upham.....	476 F	Catholic <sup>4</sup>
Marygrove College; Detroit, Mich. (1910).....	Sister M. Honora.....	699 F	Catholic <sup>4</sup>
Maryknoll Teachers College; Maryknoll, N. Y. (1931).....	Sister J. M. Lyons.....	142 F	Catholic <sup>4</sup>
Maryland, University of; College Park, Md. (1807) <sup>19, 49</sup> .....	Wilson H. Elkins.....	13,959 C	State
Maryland State Teachers College; Bowie, Md. (1867).....	William E. Henry.....	328 C	State
Maryland State Teachers College; Frostburg, Md. (1902) <sup>19</sup> .....	R. Bowen Hardesty.....	439 C	State
Maryland State Teachers College; Salisbury, Md. (1925).....	Wilbur Devilbiss.....	342 C	State
Maryland State Teachers College; Towson, Md. (1866).....	Earle T. Hawkins.....	1,127 C	State
Marylhurst College; Marylhurst, Oreg. (1930).....	Sister M. E. Clare.....	430 F	Catholic <sup>4</sup>
Marymount College; Salina, Kans. (1922).....	Mother M. H. Robben.....	372 F	Catholic <sup>4</sup>
Marymount College; Tarrytown, N. Y. (1907).....	Mother M. du Sacre Coeur.....	986 F	Catholic <sup>4</sup>
Maryville College; Maryville, Tenn. (1819).....	Ralph W. Lloyd.....	664 C	Presbyterian <sup>4</sup>
Maryville College of the Sacred Heart; St. Louis, Mo. (1872) <sup>50</sup> .....	Mother M. O. Mouton.....	305 F	Catholic <sup>4</sup>
Marywood College; Scranton, Pa. (1915).....	Sister M. Eugenia.....	717 F	Catholic <sup>4</sup>
Massachusetts, University of; Amherst, Mass. (1863).....	J. Paul Mather.....	4,076 C	State
Massachusetts Institute of Technology; Cambridge, Mass. (1861).....	James R. Killian, Jr.....	5,405 C	Private
Massachusetts Maritime Academy; Buzzards Bay, Mass. (1892).....	J. D. Wilson <sup>28</sup> .....	183 M	State
Massachusetts School of Art; Boston, Mass. (1873).....	Gordon L. Reynolds.....	425 C	State
Massachusetts State Teachers College; Boston, Mass. (1852).....	William F. Looney.....	126 C	State
Massachusetts State Teachers College; Bridgewater, Mass. (1840) <sup>19</sup> .....	Clement C. Maxwell.....	694 C	State
Massachusetts State Teachers College; Fitchburg, Mass. (1894).....	Ralph F. Weston.....	520 C	State
Massachusetts State Teachers College; Framingham, Mass. (1839).....	Martin F. O'Connor.....	604 F	State
Massachusetts State Teachers College; Lowell, Mass. (1894).....	Daniel H. O'Leary.....	438 C	State
Massachusetts State Teachers College; North Adams, Mass. (1894).....	Eugene L. Freel.....	257 C	State
Massachusetts State Teachers College; Salem, Mass. (1854).....	Frederick A. Meier.....	737 C	State
Massachusetts State Teachers College; Westfield, Mass. (1839).....	Edward J. Scanlon.....	320 C	State
Massachusetts State Teachers College; Worcester, Mass. (1871).....	Eugene A. Sullivan.....	520 C	State
McMurry College; Abilene, Tex. (1920).....	Harold G. Cooke.....	734 C	Methodist <sup>4</sup>
McNeese State College; Lake Charles, La. (1939).....	Wayne N. Cusic.....	1,539 C	State
McPherson College; McPherson, Kans. (1887).....	D. W. Bittinger.....	362 C	Brethren
Medical Evangelists, Coll. of; Loma Linda & Los Angeles, Calif. (1910).....	G. T. Anderson.....	752 C	7th Day Adven.
Memphis State College; Memphis, Tenn. (1912).....	J. Millard Smith.....	3,400 C	State
Menlo College; Menlo Park, Calif. (1927).....	William E. Kratt.....	375 M	Private
Mercer University; Macon, Ga. (1833).....	George B. Connell.....	1,094 C	Baptist
Mercy College; Detroit, Mich. (1941).....	Sister Mary Lucille.....	517 F	Catholic <sup>4</sup>
Mercyhurst College; Erie, Pa. (1926).....	Mother M. Eustace.....	274 F	Catholic <sup>4</sup>
Meredith College; Raleigh, N. C. (1891).....	Carlyle Campbell.....	550 F	Baptist



Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Merrimack College; North Andover, Mass. (1947).....	Rev. Vincent A. McQuade	1,014 C	Catholic
Miami, University of; Coral Gables, Fla. (1925).....	Jay F. W. Pearson	11,077 C	Private
Miami University; Oxford, Ohio (1809).....	John D. Millett	4,947 C	State
Michigan, University of; Ann Arbor, Mich. (1817) <sup>8</sup> .....	Harlan Hatcher	20,654 C	State
Michigan College of Mining & Technology; Houghton, Mich. (1885) <sup>65</sup>	Grover C. Dillman	2,225 C	State
Michigan State Normal College. See Eastern Michigan College			
Michigan St. U. of Agr. & App. Sc.; East Lansing, Mich. (1855) <sup>56, 66</sup>	John A. Hannah	17,089 C	State
Middle Tennessee State College; Murfreesboro, Tenn. (1909).....	Q. M. Smith	1,874 C	State
Middlebury College; Middlebury, Vt. (1800).....	Samuel S. Stratton	1,230 C	Private
Midland College; Fremont, Nebr. (1887).....	Paul W. Dieckman	387 C	Lutheran
Midwestern University; Wichita Falls, Tex. (1922).....	D. L. Ligon	1,496 C	City
Miles College; Birmingham, Ala. (1907).....	W. A. Bell	567 C	Col. M.E.
Millikin University; Decatur, Ill. (1901).....	C. L. Miller <sup>13</sup>	992 C	Presbyterian <sup>4</sup>
Mills College; Oakland, Calif. (1852).....	Lynn T. White, Jr.	525 F <sup>8</sup>	Private
Millsaps College; Jackson, Miss. (1892).....	H. E. Finger, Jr.	782 C	Methodist
Milwaukee-Downer College; Milwaukee, Wis. (1851).....	John B. Johnson, Jr.	161 F	Private
Miner Teachers College. See District of Columbia Teachers College			
Minnesota, University of; Minneapolis, Minn. (1851) <sup>21</sup>	J. L. Morrill	21,001 C	State
Minnesota State Teachers College; Bemidji, Minn. (1919).....	C. R. Sattgast	778 C	State
Minnesota State Teachers College; Mankato, Minn. (1867).....	C. L. Crawford	3,118 C	State
Minnesota State Teachers College; Moorhead, Minn. (1887).....	A. L. Knoblauch	755 C	State
Minnesota State Teachers College; St. Cloud, Minn. (1869).....	George F. Budd	1,947 C	State
Minnesota State Teachers College; Winona, Minn. (1858).....	Nels Minne	778 C	State
Misericordia, College; Dallas, Pa. (1923).....	Sister Mary Gonzaga	822 F	Catholic <sup>4</sup>
Mississippi, University of; University, Miss. (1848).....	J. D. Williams <sup>14</sup>	2,677 C	State
Mississippi College; Clinton, Miss. (1826).....	D. M. Nelson	1,510 C	Baptist
Mississippi Southern College; Hattiesburg, Miss. (1910).....	William D. McCain	3,069 C	State
Mississippi State College; State College, Miss. (1878).....	Benjamin F. Hilburn	3,468 C	State
Mississippi State College for Women; Columbus, Miss. (1884).....	Charles P. Hogarth	1,020 F	State
Mississippi Vocational College; Itta Bena, Miss. (1950).....	J. H. White	453 C	State
Missouri, University of; Columbia & Rolla, Mo. (1839).....	Elmer Ellis	10,316 C	State
School of Mines & Metallurgy; Rolla, Mo. (1870).....	Curtis L. Wilson <sup>17</sup>	1,788 C	State
Missouri Valley College; Marshall, Mo. (1888).....	M. Earle Collins	445 C	Presbyterian
Monmouth College; Monmouth, Ill. (1853).....	Robert W. Gibson	613 C	Presbyterian
Montana School of Mines; Butte, Mont. (1893).....	J. R. Van Pelt	276 C	State
Montana State College; Bozeman, Mont. (1893).....	Roland R. Renne	2,550 C	State
Montana State University; Missoula, Mont. (1893).....	Carl McFarland	2,677 C	State
Moravian College; Bethlehem, Pa. (1742).....	Raymond S. Hauptert	679 C	Moravian
Morehead State College; Morehead, Ky. (1923).....	Adron Doran	1,078 C	State
Morhouse College. See Atlanta University System			
Morgan State College; Baltimore, Md. (1867).....	Martin D. Jenkins	1,842 C	State
Morningside College; Sioux City, Iowa (1894).....	Earla Roadman	1,295 C	Methodist
Morris Brown College; Atlanta, Ga. (1881).....	John H. Lewis	743 C	A. M. E.
Mount Angel Seminary; St. Benedict, Oreg. (1889).....	Rt. Rev. Damian Jentges	90 M	Catholic
Mount Angel Women's College; Mount Angel, Oreg. (1888).....	Mother Mary Gemma	65 F	Catholic <sup>4</sup>
Mount Holyoke College; South Hadley, Mass. (1837).....	Roswell G. Ham	1,259 F	Private
Mount Mary College; Milwaukee, Wis. (1913).....	Sister Mary J. Francis	956 F	Catholic
Mount Mercy College; Pittsburgh, Pa. (1929).....	Sister M. Muriel <sup>13</sup>	576 F	Catholic <sup>4</sup>
Mount St. Agnes College; Baltimore, Md. (1890).....	Sister M. Cleophas	244 F	Catholic <sup>4</sup>
Mount St. Joseph-on-the-Ohio, College of; Mt. St. Joseph, O. (1854)	Sister Maria Corona <sup>17</sup>	494 F	Catholic <sup>4</sup>
Mount St. Joseph Teachers College; Buffalo, N. Y. (1937).....	Sister M. Hubert	294 F	Catholic <sup>4</sup>
Mount St. Mary College; Hooksett, N. H. (1934).....	Sister M. Mauritia	127 F	Catholic <sup>4</sup>
Mount St. Mary's College; Emmitsburg, Md. (1808).....	Rt. Rev. John L. Sheridan	512 M	Catholic
Mount St. Mary's College; Los Angeles, Calif. (1925).....	Sister Rosemary	547 F	Catholic <sup>4</sup>
Mount St. Scholastica College; Atchison, Kans. (1863) <sup>19</sup>	Mother M. A. Schroll	416 F	Catholic <sup>4</sup>
Mount St. Vincent, College of; New York, N. Y. (1847).....	Sister Catharine Marie <sup>17</sup>	532 F	Catholic <sup>4</sup>
Mount Union College; Alliance, Ohio (1846).....	Carl C. Bracy	644 C	Methodist <sup>4</sup>
Muhlenberg College; Allentown, Pa. (1848).....	J. Conrad Seegers	779 M <sup>24</sup>	Lutheran <sup>4</sup>
Mundelein College; Chicago, Ill. (1930).....	Sister Mary John Michael	928 F	Catholic <sup>4</sup>
Murray State College; Murray, Ky. (1922).....	Ralph H. Woods	1,821 C	State
Muskingum College; New Concord, Ohio (1837).....	Robert N. Montgomery	885 C	Presbyterian
National College of Education; Evanston, Ill. (1886).....	K. Richard Johnson	684 C	Private
Nazareth College; Louisville, Ky. (1920).....	Sister M. Gertrude	757 F <sup>8</sup>	Catholic <sup>4</sup>
Nazareth College; Nazareth, Mich. (1924).....	Sister M. Kathleen	398 F	Catholic <sup>4</sup>
Nazareth College; Rochester, N. Y. (1924).....	Rev. Mother M. Helene	475 F	Catholic <sup>4</sup>
Nebraska, University of; Lincoln & Omaha, Nebr. (1869).....	Clifford Hardin <sup>14</sup>	7,620 C	State
Nebraska State Teachers College; Chadron, Nebr. (1911).....	Barton L. Kline	439 C	State
Nebraska State Teachers College; Kearney, Nebr. (1905).....	Herbert L. Cushing	1,637 C	State
Nebraska State Teachers College; Peru, Nebr. (1867).....	Neal S. Gomon	658 C	State
Nebraska State Teachers College; Wayne, Nebr. (1910).....	W. A. Brandenburg	888 C	State
Nebraska Wesleyan University; Lincoln, Nebr. (1887).....	A. Leland Forrest <sup>14</sup>	858 C	Methodist

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Nevada, University of; Reno & Las Vegas, Nev. (1874).....	Minard W. Stout.....	1,590 C	State
New Bedford Inst. of Textiles & Tech.; New Bedford, Mass. (1898)	John E. Foster.....	305 C	State
New Church, Academy of the; Bryn Athyn, Pa. (1876).....	George de Charms.....	84 C	(25)
New England Conservatory of Music; Boston, Mass. (1867).....	Harrison Keller.....	391 C	Private
New Hampshire, University of; Durham, N. H. (1866).....	Eldon L. Johnson.....	3,155 C	State
New Hampshire State Teachers College; Keene, N. H. (1909).....	Lloyd P. Young.....	598 C	State
New Hampshire State Teachers College; Plymouth, N. H. (1871).....	Harold E. Hyde.....	351 C	State
New Jersey College for Women. See Douglass College.			
New Jersey State Teachers College; Glassboro, N. J. (1923).....	Thomas E. Robinson.....	520 C	State
New Jersey State Teachers College; Jersey City, N. J. (1929).....	M. B. Gilligan.....	527 C	State
New Jersey State Teachers College; Montclair, N. J. (1908).....	E. DeAlton Partridge.....	1,450 C	State
New Jersey State Teachers College; Newark, N. J. (1913) <sup>27</sup> .....	Eugene G. Wilkins.....	1,800 C	State
New Jersey State Teachers College; Paterson, N. J. (1923) <sup>27</sup> .....	Marion E. Shea.....	1,000 C	State
New Jersey State Teachers College; Trenton, N. J. (1855).....	Roscoe L. West.....	1,509 C	State
New Mexico, University of; Albuquerque, N. Mex. (1889).....	Tom L. Popejoy.....	4,152 C	State
New Mexico College of A & M Arts; State College, N. Mex. (1889).....	Roger B. Corbett.....	2,246 C	State
New Mexico Highlands University; Las Vegas, N. Mex. (1893).....	Thomas C. Donnelly.....	734 C	State
New Mexico Institute of Mining and Tech.; Socorro, N. Mex. (1889) <sup>5</sup> .....	E. J. Workman.....	250 C	State
New Mexico Military Institute; Roswell, N. Mex. (1893).....	Lt. Gen. Hobart R. Gay <sup>28</sup> .....	156 M	State
New Mexico Western College; Silver City, N. Mex. (1893).....	J. Cloyd Miller.....	685 C	State
New Rochelle, College of; New Rochelle, N. Y. (1904).....	Mother Dorothea Dunkerley.....	835 F	Catholic <sup>4</sup>
New York, College of the City of:			
Brooklyn College; Brooklyn, N. Y. (1930).....	Harry D. Gideonse.....	8,825 C	City
City College; New York, N. Y. (1847).....	Buell G. Gallagher.....	20,284 C	City
Hunter College; New York, N. Y. (1870).....	George N. Shuster.....	8,131 F <sup>29</sup>	City
Queens College; Flushing, N. Y. (1937).....	John J. Theobald.....	5,078 C	City
New York, State University of; Albany, N. Y. (1948).....	William S. Carlson.....	29,278 C	State
Agricultural & Technical Institute; Alfred, N. Y. (1908).....	Walter C. Hinkle <sup>44</sup> .....	1,063 C	State
Agricultural & Technical Institute; Canton, N. Y. (1906).....	Albert E. French <sup>47</sup> .....	409 C	State
Agricultural & Technical Institute; Cobleskill, N. Y. (1911).....	Ray L. Wheeler <sup>48</sup> .....	301 C	State
Agricultural & Technical Institute; Delhi, N. Y. (1915).....	William R. Kunsela <sup>47</sup> .....	225 C	State
Agricultural & Technical Institute; Farmingdale, N. Y. (1916).....	William A. Medesy <sup>47</sup> .....	4,948 C	State
Agricultural & Technical Institute; Morrisville, N. Y. (1908).....	Malcolm B. Galbreath <sup>47</sup> .....	456 C	State
College of Agriculture at Cornell U.; Ithaca, N. Y. (1904).....	William I. Myers <sup>17</sup> .....	2,065 C	State
College of Ceramics at Alfred U.; Alfred, N. Y. (1900).....	John F. McMahon <sup>17</sup> .....	392 C	State
College of Forestry; Syracuse, N. Y. (1911).....	Hardy L. Shirley <sup>17</sup> .....	619 M <sup>6</sup>	State
College of Home Economics at Cornell U.; Ithaca, N. Y. (1900).....	Helen G. Canoyer <sup>17</sup> .....	731 F <sup>8</sup>	State
College of Medicine at New York City; Brooklyn, N. Y. (1857).....	Howard W. Potter <sup>17</sup> .....	626 C	State
College of Medicine at Syracuse; Syracuse, N. Y. (1834).....	William R. Willard <sup>17</sup> .....	494 C	State
Harpur College; Endicott, N. Y. (1946).....	Glenn G. Bartle.....	766 C	State
Maritime College at Ft. Schuyler; New York, N. Y. (1874).....	Vice Adm. C. T. Durgin.....	436 M	State
School of Ind. & Labor Rel. at Cornell U.; Ithaca, N. Y. (1945).....	M. P. Catherwood <sup>17</sup> .....	346 C	State
Teachers College; Albany, N. Y. (1844).....	Evan R. Collins.....	2,302 C	State
Teachers College; Brockport, N. Y. (1841).....	Donald M. Tower.....	1,156 C	State
Teachers College; Buffalo, N. Y. (1869).....	Harvey M. Rice.....	2,738 C	State
Teachers College; Cortland, N. Y. (1863).....	Donnal V. Smith.....	1,895 C	State
Teachers College; Fredonia, N. Y. (1867).....	Harry W. Porter.....	677 C	State
Teachers College; Geneseo, N. Y. (1867).....	Francis J. Moench.....	892 C	State
Teachers College; New Paltz, N. Y. (1886).....	William J. Haggerty.....	1,216 C	State
Teachers College; Oneonta, N. Y. (1887).....	Royal F. Netzer.....	902 C	State
Teachers College; Oswego, N. Y. (1861).....	Foster S. Brown.....	1,468 C	State
Teachers College; Plattsburgh, N. Y. (1889).....	George W. Angell.....	961 C	State
Teachers College; Potsdam, N. Y. (1889).....	Frederick W. Crumb.....	984 C	State
Veterinary College at Cornell U.; Ithaca, N. Y. (1894).....	William A. Hagan <sup>17</sup> .....	210 C	State
New York University; New York, N. Y. (1831).....	Carroll V. Newsom.....	12,756 C	Private
Newark College of Engineering; Newark, N. J. (1881).....	Robert W. Van Houten.....	3,240 C	City & State
Newberry College; Newberry, S. C. (1856).....	C. A. Kaufmann.....	454 C	Lutheran
Newcomb College; New Orleans, La. (1886) <sup>31</sup> .....	John R. Hubbard <sup>17</sup> .....	775 F	Private
Newton College of the Sacred Heart; Newton, Mass. (1946).....	Mother Eleanor S. Kenny.....	275 F	Catholic <sup>4</sup>
Niagara University; Niagara Falls, N. Y. (1856).....	V. Rev. Francis L. Meade.....	1,218 C	Catholic
North Carolina, Agr. & Tech. College of; Greensboro, (1891).....	Warmonth T. Gibbs.....	3,290 C	State
North Carolina, University of; Chapel Hill, N. C. (1931) <sup>30</sup> .....	William Friday <sup>13</sup> .....	13,124 Co	State
College of Agriculture & Engineering; Raleigh, N. C. (1889).....	Carey H. Bostian <sup>14</sup> .....	4,593 C	State
University of N. C. at Chapel Hill; Chapel Hill, N. C. (1789).....	Robert B. House <sup>14</sup> .....	6,354 C	State
Woman's College; Greensboro, N. C. (1891).....	Edward K. Graham <sup>14</sup> .....	2,177 F <sup>8</sup>	State
North Carolina College; Durham, N. C. (1910).....	Alfonso Elder.....	1,428 C	State
North Carolina State Teachers Coll.; Elizabeth City, N. C. (1892).....	S. D. Williams.....	419 C	State
North Carolina State Teachers Coll.; Fayetteville, N. C. (1877).....	J. W. Seabrook.....	553 C	State
North Carolina State Teachers Coll.; Winston-Salem (1892).....	Francis L. Atkins.....	800 C	State
North Central College; Naperville, Ill. (1861).....	C. Harve Geiger.....	723 C	Evan. Un. Breth.
North Dakota, University of; Grand Forks, N. Dak. (1883).....	George W. Starcher.....	2,979 C	State

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
North Dakota Agricultural College; Fargo, N. Dak. (1889).....	Fred S. Hultz.....	2,587 C	State
North Dakota State Normal & Ind. College; Ellendale (1889).....	T. S. Jenkins.....	184 C	State
North Dakota State Teachers College; Dickinson, N. Dak. (1917)	Charles E. Scott.....	404 C	State
North Dakota State Teachers College; Mayville, N. Dak. (1889)...	O. A. DeLong.....	326 C	State
North Dakota State Teachers College; Minot, N. Dak. (1913).....	C. P. Lura.....	1,093 C	State
North Dakota State Teachers College; Valley City, N. Dak. (1890)	R. L. Lokken.....	536 C	State
North Georgia College; Dahlonega, Ga. (1873).....	Merritt E. Hoag.....	600 C	State
North Texas State College; Denton, Tex. (1890).....	J. C. Matthews.....	5,345 C	State
Northeast Louisiana State College; Monroe, La. (1931).....	Lewis C. Slater.....	1,506 C	State
Northeast Missouri State Teachers College; Kirksville, Mo. (1867)	Walter H. Ryle.....	1,617 C	State
Northeastern State College; Tahlequah, Okla. (1846).....	Harrell E. Garrison.....	1,488 C	State
Northeastern University; Boston, Mass. (1898).....	Carl S. Eli.....	13,000 C	Private
Northern Baptist Theological Seminary; Chicago, Ill. (1913).....	Charles W. Koller.....	328 C	Baptist <sup>4</sup>
Northern Illinois State College; DeKalb, Ill. (1895).....	Leslie A. Holmes.....	3,203 C	State
Northern Michigan College; Marquette, Mich. (1899).....	H. A. Tape.....	902 C	State
Northern State Teachers College; Aberdeen, S. Dak. (1901) <sup>19</sup> .....	Warren C. Lovinger.....	760 C	State
Northwest Missouri State College; Maryville, Mo. (1905).....	J. W. Jones.....	1,177 C	State
Northwest Nazarene College; Nampa, Idaho (1913).....	John E. Riley.....	473 C	Nazarene
Northwestern State College; Alva, Okla. (1898).....	Luther D. Brown.....	701 C	State
Northwestern State College; Natchitoches, La. (1884).....	John S. Kyser.....	1,987 C	State
Northwestern University; Evanston & Chicago, Ill. (1851).....	J. Roscoe Miller.....	15,678 C	Private
Norwich University; Northfield, Vt. (1819).....	Maj. Gen. E. N. Harmon.....	700 M	Private
Notre Dame College; Belmont, Calif. (1868).....	Sister Teresa Augustine.....	150 F	Catholic <sup>4</sup>
Notre Dame College; Cleveland, Ohio (1922).....	Sister Mary Ralph.....	302 F	Catholic <sup>4</sup>
Notre Dame College of Staten Island; Staten Island, N. Y. (1931)	Mother Saint Egbert.....	250 F	Catholic <sup>4</sup>
Notre Dame Du Lac, University of; Notre Dame, Ind. (1842).....	Rev. Theodore M. Hesbur.....	5,589 M	Catholic
Notre Dame of Maryland, College of; Baltimore, Md. (1873).....	Sister Margaret Mary.....	344 F	Catholic <sup>4</sup>
Notre Dame Seminary; New Orleans, La. (1923) <sup>19</sup> .....	Rev. Thomas U. Bolduc <sup>16</sup> .....	18 M	Catholic
Oberlin College; Oberlin, Ohio (1833).....	William E. Stevenson.....	1,976 C	Private
Occidental College; Los Angeles, Calif. (1887).....	Arthur G. Coons.....	1,281 C	Presbyterian <sup>4</sup>
Oglethorpe University; Atlanta, Ga. (1835).....	George C. Seward <sup>18</sup> .....	267 C	Private
Ohio State University; Columbus, Ohio (1870).....	Howard L. Bevis.....	19,500 C	State
Ohio University; Athens, Ohio (1804).....	John C. Baker.....	6,109 C	State
Ohio Wesleyan University; Delaware, Ohio (1842).....	Arthur S. Flemming.....	1,972 C	Methodist <sup>4</sup>
Oklahoma, University of; Norman & Oklahoma City, Okla. (1890)	George L. Cross.....	9,934 C	State
Oklahoma A & M College; Stillwater, Okla. (1891).....	Oliver S. Willham.....	9,113 C	State
Oklahoma Baptist University; Shawnee, Okla. (1910).....	John W. Raley.....	1,183 C	Baptist
Oklahoma City University; Oklahoma City, Okla. (1904).....	Cluslor Q. Smith.....	2,769 C	Methodist
Oklahoma College for Women; Chickasha, Okla. (1908).....	Dan Procter.....	742 F	State
Omaha, University of; Omaha, Nebr. (1908).....	Milo Bait.....	3,936 C	City
Oregon, University of; Eugene, Oreg. (1872).....	O. Meredith Wilson.....	4,501 C	State
Oregon College of Education; Monmouth, Oreg. (1882).....	Roy E. Lieuellen.....	675 C	State
Oregon State College; Corvallis, Oreg. (1868).....	A. L. Strand.....	5,956 C	State
Ottawa University; Ottawa, Kans. (1865).....	Andrew B. Martin.....	421 C	Baptist <sup>4</sup>
Otterbein College; Westerville, Ohio (1847).....	J. Gordon Howard.....	672 C	Evan. U. Breth. <sup>4</sup>
Ouachita Baptist College; Arkadelphia, Ark. (1886).....	Ralph A. Phelps, Jr.....	640 C	Baptist
Our Lady of Cincinnati College; Cincinnati, Ohio (1935).....	Sister M. Grace Grace.....	481 F	Catholic <sup>4</sup>
Our Lady of the Elms, College of; Chicopee, Mass. (1928).....	Most Rev. C. J. Weldon.....	350 F	Private
Our Lady of the Lake College; San Antonio, Tex. (1896).....	John L. McMahon.....	517 F <sup>8</sup>	Catholic <sup>4</sup>
Ozarks, College of the; Clarksville, Ark. (1834).....	Winslow S. Drummond.....	252 C	Presbyterian
Pacific, College of the; Stockton, Calif. (1851).....	Robert E. Burns.....	1,263 C	Methodist <sup>4</sup>
Pacific Lutheran College; Parkland, Wash. (1894).....	S. C. Eastvold.....	1,180 C	Lutheran
Pacific Union College; Angwin, Calif. (1882).....	R. W. Fowler.....	867 C	7th Day Adven.
Pacific University; Forest Grove, Oreg. (1849).....	Charles J. Armstrong.....	560 C	Congregational <sup>4</sup>
Paine College; Augusta, Ga. (1883).....	E. C. Peters.....	316 C	Methodist
Panhandle A & M College; Goodwell, Okla. (1909).....	Marvin McKee.....	761 C	State
Park College; Parkville, Mo. (1875).....	Robert E. Long.....	322 C	Presbyterian <sup>4</sup>
Parsons College; Fairfield, Iowa (1875).....	Millard G. Roberts.....	357 C	Presbyterian <sup>4</sup>
Pasadena College; Pasadena, Calif. (1902).....	W. T. Purkiser.....	772 C	Nazarene
Peabody Institute; Baltimore, Md. (1857).....	William L. Marbury.....	193 C	Private
Pembroke College; Providence, R. I. (1891) <sup>12</sup> .....	Nancy D. Lewis <sup>17</sup> .....	830 F	Private
Pembroke State College; Pembroke, N. C. (1887).....	R. D. Wellons.....	152 C	State
Pennsylvania, University of; Philadelphia, Pa. (1740).....	Gaylord P. Harnwell.....	10,718 C	Private
Pennsylvania Military College; Chester, Pa. (1821).....	Edward E. MacMorland.....	625 M	Private
Pennsylvania State College of Optometry; Philadelphia, Pa. (1919)	Albert Fitch.....	180 C	Private
Pennsylvania State Teachers College; Bloomsburg, Pa. (1839).....	Harvey A. Andruss.....	946 C	State
Pennsylvania State Teachers College; California, Pa. (1852).....	C. Herman Grose.....	1,093 C	State
Pennsylvania State Teachers College; Cheyney, Pa. (1837).....	James H. Duckrey.....	502 C	State
Pennsylvania State Teachers College; Clarion, Pa. (1867).....	Paul G. Chandler.....	639 C	State
Pennsylvania State Teachers College; East Stroudsburg, Pa. (1893)	Theodore M. Moore <sup>13</sup> .....	983 C	State
Pennsylvania State Teachers College; Edinboro, Pa. (1856).....	Thomas R. Miller.....	585 C	State



Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Pennsylvania State Teachers College; Indiana, Pa. (1875).....	Willis E. Pratt.....	1,841 C	State
Pennsylvania State Teachers College; Kutztown, Pa. (1866).....	Q. A. W. Rohrbach.....	856 C	State
Pennsylvania State Teachers College; Lock Haven, Pa. (1870)....	Richard T. Parsons.....	690 C	State
Pennsylvania State Teachers College; Mansfield, Pa. (1857)....	James G. Morgan.....	645 C	State
Pennsylvania State Teachers College; Millersville, Pa. (1855)....	D. L. Biemesderfer.....	1,100 C	State
Pennsylvania State Teachers College; Shippensburg, Pa. (1871)...	Harry L. Kriner.....	931 C	State
Pennsylvania State Teachers College; Slippery Rock, Pa. (1889)...	Dale W. Houk.....	862 C	State
Pennsylvania State University; University Park, Pa. (1871)....	Charles S. Swope.....	1,837 C	State
Philadelphia Textile Institute; Philadelphia, Pa. (1884).....	Eric A. Walker.....	14,433 C	State
Philander Smith College; Little Rock, Ark. (1868).....	Bertrand W. Hayward.....	351 C	Private
Phillips University; Enid, Okla. (1906).....	M. LaFayette Harris.....	551 C	Methodist
Pittsburgh, University of; Pittsburgh, Pa. (1787).....	Eugene S. Briggs.....	1,014 C	Disc. of Christ
Pomona College; Claremont, Calif. (1887).....	Edward H. Litchfield <sup>14</sup> .....	12,992 C	Private
Portland, University of; Portland, Oreg. (1901).....	E. Wilson Lyon.....	1,003 C	Private
Prairie View A & M College; Prairie View, Tex. (1876).....	Rev. Howard J. Kenna.....	1,186 C	Catholic <sup>4</sup>
Pratt Institute; Brooklyn, N. Y. (1887).....	E. B. Evans.....	2,551 C	State
Presbyterian College; Clinton, S. C. (1880).....	Francis H. Horn.....	3,050 C	Private
Princeton University; Princeton, N. J. (1746).....	Marshall W. Brown.....	476 C	Presbyterian
Principia College; Elmhurst, Ill. (1898).....	Harold W. Fodds.....	3,500 M	Private
Providence College; Providence, R. I. (1917).....	William E. Morgan.....	455 C	Private <sup>23</sup>
Puerto Rico, Catholic University of; Ponce, P. R. (1948).....	V. Rev. Robert J. Slavin.....	1,482 M	Catholic <sup>4</sup>
Puerto Rico, Polytechnic Institute of; San Germán, P. R. (1912)...	M. Rev. J. E. McManus.....	2,020 C	Catholic <sup>4</sup>
Puerto Rico, University of; Rio Piedras, P. R. (1903).....	Ronald C. Bower.....	633 C	Presbyterian <sup>4</sup>
Puget Sound, College of; Tacoma, Wash. (1888).....	Jaime Benitez <sup>14</sup> .....	13,382 C	Commonwealth
Purdue University; Lafayette, Ind. (1869).....	R. Franklin Thompson.....	1,766 C	Methodist <sup>4</sup>
Queens College; Charlotte, N. C. (1857).....	Frederick L. Hovde.....	11 259 C	State
Queens College (NYC). See New York, College of the City of.....	Edwin R. Walker.....	350 F <sup>8</sup>	Presbyterian <sup>4</sup>
Quincy College; Quincy, Ill. (1860).....	Rev. Julian Woods.....	600 C	Catholic <sup>4</sup>
Radcliffe College; Cambridge, Mass. (1879) <sup>44</sup> .....	Wilbur K. Jordan.....	1,438 F	Private
Radford College; Radford, Va. (1913) <sup>45</sup> .....	Charles K. Martin, Jr.....	827 F <sup>8</sup>	State
Randolph-Macon College; Ashland, Va. (1830).....	J. Earl Moreland.....	464 M	Methodist <sup>4</sup>
Randolph-Macon Woman's College; Lynchburg, Va. (1891).....	W. F. Quillian, Jr.....	667 F	Methodist <sup>4</sup>
Redlands, University of; Redlands, Calif. (1907).....	George H. Armacost.....	1,210 C	Baptist <sup>4</sup>
Reed College; Portland, Oreg. (1911).....	Richard H. Sullivan.....	579 C	Private
Regis College; Denver, Colo. (1888).....	V. Rev. Richard F. Ryan.....	864 M <sup>6</sup>	Catholic <sup>4</sup>
Regis College for Women; Weston, Mass. (1927).....	Sister Mary Alice.....	565 F	Catholic <sup>4</sup>
Rensselaer Polytechnic Institute; Troy, N. Y. (1824).....	Livingston W. Houston.....	3,563 M <sup>6</sup>	Private
Rhode Island College of Education; Providence, R. I. (1854).....	William C. Gaige.....	561 C	State
Rhode Island School of Design; Providence, R. I. (1877).....	John R. Frazier.....	679 C	Private
Rhode Island, University of; Kingston, R. I. (1892).....	Carl R. Woodward.....	2,243 C	State
Rice Institute; Houston, Tex. (1912).....	William V. Houston.....	1,773 C	Private
Richmond, University of; Richmond, Va. (1830).....	George M. Modlin.....	1,634 Co	Baptist <sup>4</sup>
Ricks College; Rexburg, Idaho (1888).....	John L. Clarke.....	697 C	Latter-day Saints
Rider College; Trenton, N. J. (1865).....	Franklin F. Moore.....	1,563 C	Private
Ripon College; Ripon, Wis. (1851).....	Fred O. Pinkham.....	527 C	Private
Rivier College; Nashua, N. H. (1933).....	Sister Adelard Marie.....	243 F <sup>8</sup>	Catholic <sup>4</sup>
Roanoke College; Salem, Va. (1842).....	H. Sherman Oberly.....	491 C	Lutheran <sup>4</sup>
Rochester, University of; Rochester, N. Y. (1850).....	Cornelius W. de Kiewiet.....	5,852 C	Private
Rockford College & Rockford Men's College; Rockford, Ill. (1847)	Leland H. Carlson.....	297 Co	Private
Rockhurst College, Kansas City, Mo. (1910).....	V. Rev. M. Van Ackeren.....	1,037 M	Catholic
Rocky Mountain College; Billings, Mont. (1883).....	Herbert W. Hines.....	293 C	( <sup>88</sup> )
Rollins College; Winter Park, Fla. (1885).....	Hugh F. McKean.....	714 C	Private
Roosevelt University; Chicago, Ill. (1945).....	Edward J. Sparling.....	3,679 C	Private
Rosary College; River Forest, Ill. (1848).....	Sister M. Timothea.....	710 F <sup>8</sup>	Catholic <sup>4</sup>
Rose Polytechnic Institute; Terre Haute, Ind. (1874).....	F. L. Wilkinson, Jr.....	401 M	Private
Rosemont College of Holy Child Jesus; Rosemont, Pa. (1921)....	Mother Mary Chrysostom.....	403 F	Catholic <sup>4</sup>
Russell Sage College; Troy, N. Y. (1916).....	Lewis A. Froman.....	1,805 F	Private
Rust College; Holly Springs, Miss. (1866).....	L. M. McCoy.....	507 C	Methodist
Rutgers University; New Brunswick, N. J. (1766) <sup>20</sup> .....	Lewis W. Jones.....	10,924 Co	State
Sacramento State College; Sacramento, Calif. (1947).....	Guy A. West.....	4,398 C	State
Sacred Heart, College of the; Santurce, P. R. (1880).....	Mother R. A. Arsuaaga.....	148 F	Catholic
St. Ambrose College; Davenport, Iowa (1885).....	Rev. William J. Collins.....	1,133 M <sup>6</sup>	Catholic
St. Anselm's College; Manchester, N. H. (1889).....	Rt. Rev. B. C. Dolan.....	785 M <sup>6</sup>	Catholic <sup>4</sup>
St. Augustine's College; Raleigh, N. C. (1867).....	James A. Boyer.....	444 C	Episcopal <sup>4</sup>
St. Benedict, College of; St. Joseph, Minn. (1913).....	Mother Richarda Peters.....	303 F	Catholic <sup>4</sup>
St. Benedict's College; Atchison, Kans. (1859).....	Rt. Rev. Cuthbert McDonald.....	565 M	Catholic <sup>4</sup>
St. Bernard College; St. Bernard, Ala. (1892).....	Rt. Rev. Bede Luibel.....	325 M <sup>6</sup>	Catholic
St. Bernardine of Siena College; Loudonville, N. Y. (1937) <sup>10</sup> ...	V. Rev. B. J. Campbell.....	1,340 M <sup>6</sup>	Catholic
St. Bonaventure University; St. Bonaventure, N. Y. (1856).....	V. Rev. Brian Lhota.....	1,256 C	Catholic
St. Catherine, College of; St. Paul, Minn. (1905).....	Sister Mary William.....	958 F	Catholic <sup>4</sup>

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
St. Edward's Seminary; Kenmore, Wash. (1931).....	V. Rev. John R. Sullivan	139 M	Catholic
St. Elizabeth, College of; Convent Station, N. J. (1899).....	Sister Hildegard Marie...	459 F	Catholic
St. Francis, College of; Joliet, Ill. (1925).....	Sister Mary Elvira.....	418 F	Catholic <sup>4</sup>
St. Francis College; Loretto, Pa. (1847).....	Rev. Xavier Crowley.....	698 C	Catholic <sup>4</sup>
St. John's College; Annapolis, Md. (1696).....	Richard D. Weigle.....	135 C	Private
St. John's College; Camarillo and Los Angeles, Calif. (1926).....	V. Rev. J. W. Richardson	122 M	Catholic
St. John's University; Brooklyn, N. Y. (1870).....	V. Rev. John A. Flynn...	7,525 C	Catholic
St. John's University; Collegeville, Minn. (1857).....	Rt. Rev. Dworschak.....	1,100 M	Catholic
St. Joseph College; Emmitsburg, Md. (1809).....	Sister Hilda.....	301 F	Catholic <sup>4</sup>
St. Joseph College; West Hartford, Conn. (1932) <sup>10</sup> .....	Mother M. Ethelreda...	350 F	Catholic
St. Joseph's College; Collegeville, Ind (1889).....	V. Rev. R. H. Gross.....	779 M	Catholic
St. Joseph's College; Philadelphia, Pa. (1851).....	V. Rev. E. G. Jacklin.....	1,823 M <sup>6</sup>	Catholic
St. Joseph's College for Women; Brooklyn, N. Y. (1916).....	V. Rev. F. X. FitzGibbon <sup>13</sup>	319 F	Catholic
St. Lawrence University; Canton, N. Y. (1856).....	Eugene G. Bewkes.....	1,289 C	Private
St. Louis University; St. Louis, Mo. (1818) <sup>10</sup> .....	V. Rev. Paul C. Reinert...	8,631 C	Catholic <sup>4</sup>
St. Martin's College; Olympia, Wash. (1895).....	Rev. Damian Glenn.....	230 M	Catholic <sup>4</sup>
St. Mary College; Xavier, Kans. (1923).....	Arthur M. Murphy.....	415 F	Catholic
St. Mary of the Springs, College of; Columbus, Ohio (1911).....	Sister M. Angelita.....	309 F	Catholic <sup>4</sup>
St. Mary-of-the-Wasatch, College of; Salt Lake City, Utah (1926)	Sister Marie de Lourdes...	70 F	Catholic <sup>4</sup>
St. Mary-of-the-Woods Coll.; St. Mary-of-the-Woods, Ind. (1840)	Sister Francis Joseph...	378 F	Catholic
St. Mary's College; Notre Dame, Ind. (1844).....	Sister M. Madeleva.....	841 F	Catholic <sup>4</sup>
St. Mary's College; St. Mary's College, Calif. (1863).....	Brother W. Thomas.....	500 M	Catholic <sup>4</sup>
St. Mary's College; Winona, Minn. (1913).....	Brother J. Ambrose.....	675 M	Catholic <sup>4</sup>
St. Mary's Dominican College; New Orleans, La. (1910).....	Sister Mary Louise.....	355 F	Catholic <sup>4</sup>
St. Mary's Seminary & University; Baltimore, Md. (1791).....	V. Rev. L. P. McDonald...	800 M	Catholic
St. Mary's University; San Antonio, Tex. (1852).....	V. Rev. W. J. Buehler...	1,647 M <sup>6</sup>	Catholic
St. Michael's College; Winooski Park, Vt. (1904).....	V. Rev. F. E. Moriarty...	727 M <sup>6</sup>	Catholic <sup>4</sup>
St. Norbert College; De Pere, Wis. (1898).....	V. Rev. D. M. Burke.....	693 C	Catholic
St. Olaf College; Northfield, Minn. (1874).....	Clemens M. Granskou...	1,667 C	Lutheran <sup>4</sup>
St. Patrick's Seminary; Menlo Park, Calif. (1898).....	Rev. Thomas C. Mulligan	220 M	Catholic
St. Paul Seminary; St. Paul, Minn. (1896).....	Rev. Rudolph G. Bandas <sup>16</sup>	353 M	Catholic
St. Paul's Polytechnic Institute; Lawrenceville, Va. (1888).....	Earl H. McClenney.....	433 C	Episcopal <sup>4</sup>
St. Peter's College; Jersey City, N. J. (1872).....	V. Rev. J. J. Shanahan...	1,560 M <sup>6</sup>	Catholic
St. Rose, College of; Albany, N. Y. (1320).....	Sister C. Francis.....	739 F <sup>8</sup>	Catholic <sup>4</sup>
St. Scholastica, College of; Duluth, Minn. (1912).....	Mother Martina Hughes...	449 F	Catholic <sup>4</sup>
St. Teresa, College of; Kansas City, Mo. (1917).....	Sister M. B. O'Neill.....	457 F	Catholic <sup>4</sup>
St. Teresa, College of; Winona, Minn. (1907).....	Sister M. C. Bowe.....	611 F	Catholic <sup>4</sup>
St. Thomas, College of; St. Paul, Minn. (1885).....	V. Rev. V. J. Flynn.....	1,321 M <sup>6</sup>	Catholic
St. Thomas, University of; Houston, Tex. (1947).....	Rev. V. J. Guinan.....	313 C	Catholic
St. Vincent College; Latrobe, Pa. (1846).....	Rt. Rev. D. O. Strittmatter	850 M	Catholic
St. Xavier College; Chicago, Ill. (1847).....	Mother M. Huberta.....	482 F	Catholic <sup>4</sup>
Salem Academy & College; Winston-Salem, N. C. (1772).....	Dale H. Gramley.....	339 F <sup>8</sup>	Moravian
Sam Houston State Teachers College; Huntsville, Tex. (1879).....	Harmon Lowman.....	2,286 C	State
San Diego State College; San Diego, Calif. (1897).....	Malcolm A. Love.....	5,316 C	State
San Francisco, University of; San Francisco, Calif. (1855).....	Rev. J. F. X. Connolly...	3,111 M <sup>6</sup>	Catholic <sup>4</sup>
San Francisco College for Women; San Francisco, Calif. (1930).....	Mother Marian Kent.....	428 F	Catholic <sup>4</sup>
San Francisco State College; San Francisco, Calif. (1899).....	J. Paul Leonard.....	8,085 C	State
San Jose State College; San Jose, Calif. (1857).....	John T. Wahlquist.....	7,906 C	State
Santa Clara, University of; Santa Clara, Calif. (1851).....	Rev. Herman J. Hauck...	1,209 M <sup>6</sup>	Catholic
Sarah Lawrence College; Bronxville, N. Y. (1926).....	Harold Taylor.....	389 F <sup>8</sup>	Private
Savannah State College; Savannah, Ga. (1890) <sup>10</sup> .....	W. K. Payne.....	896 C	State
Scarritt College for Christian Workers; Nashville, Tenn. (1892).....	Foye G. Gibson.....	107 C	Methodist
Scranton, University of; Scranton, Pa. (1888).....	V. Rev. John J. Long.....	1,865 M <sup>6</sup>	Catholic <sup>4</sup>
Scripps College; Claremont, Calif. (1926).....	Frederick Hard.....	201 F	Private
Seattle Pacific College; Seattle, Wash. (1891).....	C. Hoyt Watson.....	1,001 C	Methodist <sup>4</sup>
Seattle University; Seattle, Wash. (1891).....	V. Rev. A. A. Lemieux...	2,960 C	Catholic
Seton Hall University; South Orange, N. J. (1856).....	Rt. Rev. John L. McNulty	5,439 C	Catholic
Seton Hill College; Greensburg, Pa. (1883).....	Rev. William G. Ryan...	491 F	Catholic
Shaw University; Raleigh, N. C. (1865).....	William R. Strassner...	520 C	Baptist <sup>4</sup>
Shepherd College; Shepherdstown, W. Va. (1871).....	Oliver S. Ikenberry.....	582 C	State
Shorter College; Rome, Ga. (1873).....	George A. Christenberry...	223 F <sup>8</sup>	Baptist <sup>4</sup>
Siena Heights College; Adrian, Mich. (1919).....	Rev. Mother Mary Gerald	517 F	Private
Simmons College; Boston, Mass. (1899).....	William Edgar Park.....	1,421 F <sup>8</sup>	Private
Simpson College; Indianola, Iowa (1860).....	William E. Kerstetter...	563 C	Methodist
Skidmore College; Saratoga Springs, N. Y. (1911).....	Henry T. Moore.....	1,054 F <sup>8</sup>	Private
Smith College; Northampton, Mass. (1871).....	Benjamin F. Wright.....	2,285 F	Private
Snow College; Ephraim, Utah (1888) <sup>10</sup> .....	Lester B. Whetten <sup>47</sup> ...	271 C	State
South, University of the; Sewanee, Tenn. (1857).....	Edward McCrady.....	550 M	Episcopal
South Carolina, Medical College of; Charleston, S. C. (1823).....	Kenneth M. Lynch.....	543 C	State
South Carolina, University of; Columbia, S. C. (1801).....	Donald Russell.....	4,049 C	State
South Carolina State College; Orangeburg, S. C. (1896).....	Benner C. Turner.....	1,235 C	State

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
South Dakota, University of; Vermillion, S. Dak. (1882)	I. D. Weeks	1,802 C	State
South Dakota School of Mines & Tech.; Rapid City (1885)	F. L. Partlo	643 C	State
South Dakota State College of A & M Arts; Brookings, S. Dak. (1881)	John W. Headley	2,545 C	State
Southeast Missouri State College; Cape Girardeau, Mo. (1873)	W. W. Parker	1,646 C	State
Southeastern Louisiana College; Hammond, La. (1925)	L. H. Dyson	1,385 C	State
Southeastern State College; Durant, Okla. (1909)	A. E. Shearer	1,459 C	State
Southern California, University of; Los Angeles, Calif. (1880)	Fred D. Fagg, Jr.	12,581 C	Private
Southern Illinois University; Carbondale, Ill. (1869)	Delyte W. Morris	5,027 C	State
Southern Methodist University; Dallas, Tex. (1911)	Willis M. Tate	4,633 C	Methodist
Southern Missionary College; Collegedale, Tenn. (1893)	T. W. Walters	517 C	7th Day Adven.
Southern Oregon College of Education; Ashland, Oreg. (1926)	Elmo N. Stevenson	770 C	State
Southern State College; Magnolia, Ark. (1909)	Dolph Camp	1,073 C	State
Southern State Teachers College; Springfield, S. Dak. (1897)	W. W. Ludeman	407 C	State
Southern University & A & M College; Baton Rouge, La. (1914)	Felton G. Clark	4,031 C	State
Southern Utah, College of; Cedar City, Utah (1897) <sup>32</sup>	Royden C. Braithwaite	368 C	State
Southwest Missouri State College; Springfield, Mo. (1906)	Roy Ellis	2,239 C	State
Southwest Texas State Teachers College; San Marcos, Tex. (1899)	J. G. Flowers	2,157 C	State
Southwestern at Memphis; Memphis, Tenn. (1848)	Peyton N. Rhodes	539 C	Presbyterian
Southwestern College; Winfield, Kans. (1885)	C. Orville Strohl	489 C	Methodist <sup>4</sup>
Southwestern Louisiana Institute; Lafayette, La. (1900)	Joel L. Fletcher	3,360 C	State
Southwestern State College; Weatherford, Okla. (1903)	R. H. Burton	1,326 C	State
Southwestern University; Georgetown, Tex. (1840)	William C. Finch	461 C	Methodist
Spelman College. See Atlanta University System			
Spring Hill College; Mobile, Ala. (1830)	V. Rev. A. C. Smith	1,030 C	Catholic
Springfield College; Springfield, Mass. (1885)	Donald C. Stone	1,395 C	Private
Stanford University; Stanford, Calif. (1885)	J. E. W. Sterling	7,160 C	Private
Stephen F. Austin State College; Nacogdoches, Tex. (1923)	Paul L. Boynton	1,655 C	State
Stetson University; DeLand, Fla. (1883)	J. Ollie Edmunds	1,169 C	Baptist <sup>4</sup>
Stevens Institute of Technology; Hoboken, N. J. (1870)	Jess H. Davis	1,635 M <sup>5</sup>	Private
Stillman College; Tuscaloosa, Ala. (1876)	Samuel B. Hay	262 C	Presbyterian
Stout State College; Menomonie, Wis. (1903)	Verne C. Fryklund	992 C	State
Suffolk University; Boston, Mass. (1906)	Robert J. Munce	1,213 C	Private
Sul Ross State College; Alpine, Tex. (1921)	Bryan Wildenthal	898 C	State
Susquehanna University; Selinsgrove, Pa. (1858)	G. Morris Smith	475 C	Lutheran <sup>1</sup>
Swarthmore College; Swarthmore, Pa. (1864)	Courtney Smith	892 C	Quaker <sup>4</sup>
Sweet Briar College; Sweet Briar, Va. (1901)	Anne G. Pannell	478 F	Private
Syracuse University; Syracuse, N. Y. (1870)	William P. Tolley <sup>14</sup>	9,205 C	Private
Talladega College; Talladega, Ala. (1867) <sup>10</sup>	Arthur D. Gray	301 C	Congregational <sup>14</sup>
Tampa, University of; Tampa, Fla. (1931)	Ellwood C. Nance	1,392 C	Private
Tarkio College; Tarkio, Mo. (1883)	Rev. Clyde H. Canfield	204 C	Presbyterian
Taylor University; Upland, Ind. (1846)	Evan H. Bergwall	506 C	Private
Temple University; Philadelphia, Pa. (1884)	Robert L. Johnson	14,458 C	Private
Tennessee, University of; Knoxville, Tenn. (1794)	C. E. Brehm	6,105 C	State
Tennessee Agr. & Ind. State University; Nashville, Tenn. (1912)	Walter S. Davis	2,609 C	State
Tennessee Polytechnic Institute; Cookeville, Tenn. (1915)	Everett Derryberry	2,366 C	State
Tennessee Wesleyan College; Athens, Tenn. (1857)	LeRoy A. Martin	399 C	Methodist
Texas, A & M College of; College Station, Tex. (1876)	David H. Morgan	6,088 M	State
Texas, University of; Austin, Tex. (1881) <sup>37</sup>	Logan Wilson	16,561 C <sup>39</sup>	State
Texas Christian University; Fort Worth, Tex. (1873)	M. E. Sadler	4,538 C	Disc. of Christ <sup>1</sup>
Texas College; Tyler, Tex. (1894)	D. R. Glass	400 C	Col. M. E.
Texas College of Arts & Industries; Kingsville, Tex. (1925)	Ernest H. Potteet	2,517 C	State
Texas Lutheran College; Seguin, Tex. (1891)	Edward A. Sagebiel	424 C	Lutheran
Texas Southern University; Houston, Tex. (1947)	S. M. Nabrit	2,954 C	State
Texas State College for Women; Denton, Tex. (1901)	John A. Guinn	2,012 F	State
Texas Technological College; Lubbock, Tex. (1923)	E. N. Jones	6,430 C	State
Texas Wesleyan College; Fort Worth, Tex. (1890)	Law Sone	1,136 C	Methodist
Texas Western College; El Paso, Tex. (1914) <sup>40</sup>	Dysart E. Holcomb	3,703 C	State
Thiel College; Greenville, Pa. (1866)	Frederic B. Irvin	517 C	Lutheran
Toledo, University of; Toledo, Ohio (1872)	Asa S. Knowles	2,796 C	City
Tougaloo Southern Christian College; Tougaloo, Miss. (1869)	Samuel C. Kincheloe	305 C	Cong. & D. of C. <sup>4</sup>
Transylvania College; Lexington, Ky. (1780)	Frank A. Rose	451 C	Private
Trinity College; Burlington, Vt. (1925)	Mother M. Emmanuel	173 F	Catholic <sup>4</sup>
Trinity College; Hartford, Conn. (1823)	Albert C. Jacobs	906 M	Episcopalian <sup>4</sup>
Trinity College; Washington, D. C. (1897)	Sister Mary Patrick	487 F	Catholic
Trinity University; San Antonio, Tex. (1869)	James W. Laurie	1,708 C	Presbyterian
Tufts University; Medford & Boston, Mass. (1852) <sup>41</sup>	Nils Y. Wessell	3,989 C	Private
Tulane University; New Orleans, La. (1834) <sup>41</sup>	Rufus C. Harris	5,751 Co	Private
Tulsa, University of; Tulsa, Okla. (1894)	Clarence I. Pontius	3,505 C	Presbyterian <sup>4</sup>
Ursinus College; Greenville, Tenn. (1794)	Raymond C. Rankin	300 C	Presbyterian
Tuskegee Institute; Tuskegee Institute, Ala. (1881)	L. H. Foster	1,849 C	Private
Union College; Barbourville, Ky. (1879)	Conway Boatman	661 C	Methodist



Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Union College; Lincoln, Nebr. (1891).....	H. C. Hartman.....	709 C	7th Day Adven.
Union College & University; Schenectady & Albany, N. Y. (1795).....	Carter Davidson <sup>14</sup> .....	2,305 M <sup>6</sup>	Private
Union University; Jackson, Tenn. (1834).....	Warren F. Jones.....	491 C	Baptist
U. S. Air Force Academy; Denver Colo. (1955) <sup>12</sup> .....	Maj. Gen. J. E. Briggs <sup>28</sup> .....	259 M <sup>43</sup>	Federal
U. S. Coast Guard Academy; New London, Conn. (1876).....	R. Adm. R. J. Mauerman <sup>25</sup> .....	423 M	Federal
U. S. Merchant Marine Academy; Kings Point, N. Y. (1938).....	Rear Adm. G. McLintock <sup>29</sup> .....	700 M	Federal
U. S. Military Academy; West Point, N. Y. (1802).....	Maj. Gen. G. H. Davidson <sup>28</sup> .....	2,238 M	Federal
U. S. Naval Academy; Annapolis, Md. (1845).....	R. Adm. W. Smedberg <sup>28</sup> .....	3,479 M	Federal
U. S. Naval Postgraduate School; Monterey, Calif. (1909).....	R. Adm. Earl E. Stone <sup>28</sup> .....	432 C	Federal
Upper Iowa University; Fayette, Iowa (1857).....	Eugene E. Garbee.....	302 C	Private
Upsala College; East Orange, N. J. (1893).....	E. B. Lawson.....	1,650 C	Lutheran
Ursinus College; Collegeville, Pa. (1869).....	Norman E. McClure.....	715 C	Evan. & Ref. <sup>4</sup>
Ursuline College; Louisville, Ky. (1938).....	Mother M. Columba.....	300 F	Catholic <sup>4</sup>
Ursuline College for Women; Cleveland, Ohio (1871).....	Mother Marie Sands.....	253 F	Catholic
Utah, University of; Salt Lake City, Utah (1850).....	Albert R. Olpin.....	6,638 C	State
Utah State Agricultural College; Logan, Utah (1888) <sup>32</sup> .....	Daryl Chase.....	3,032 C	State
Valdosta State College; Valdosta, Ga. (1906).....	J. Ralph Thaxton.....	383 C	State
Valparaiso University; Valparaiso, Ind. (1859).....	O. P. Kretzmann.....	2,195 C	Lutheran <sup>4</sup>
Vanderbilt University; Nashville, Tenn. (1872).....	Harvie Branscomb <sup>14</sup> .....	3,097 C	Private
Vassar College; Poughkeepsie, N. Y. (1861).....	Sarah Gibson Blanding.....	1,440 F	Private
Vermont, University of; Burlington, Vt. (1791).....	Carl W. Borgmann.....	2,772 C	State
Vermont State Teachers College; Castleton, Vt. (1867).....	Florence A. Black <sup>13</sup> .....	170 C	State
Vermont State Teachers College; Johnson, Vt. (1867).....	Odino A. Martinetti.....	128 C	State
Vermont State Teachers College; Lyndon Center, Vt. (1911).....	Arthur B. Elliott.....	151 C	State
Villa Maria College; Erie, Pa. (1925).....	Mother M. Aurelia.....	310 F	Catholic <sup>4</sup>
Villanova University; Villanova, Pa. (1842).....	V. Rev. J. Donnellon.....	2,871 M <sup>6</sup>	Catholic <sup>4</sup>
Virginia, Medical College of; Richmond, Va. (1838).....	R. Blackwell Smith, Jr.....	1,588 C	State
Virginia, University of; Charlottesville, Va. (1819) <sup>23</sup> .....	Colgate W. Darden, Jr.....	4,307 M <sup>6</sup>	State
Virginia Military Institute; Lexington, Va. (1839).....	Maj. Gen. W. H. Milton <sup>28</sup> .....	786 M	State
Virginia Polytechnic Institute; Blacksburg, Va. (1872) <sup>35</sup> .....	Walter S. Newman.....	3,733 C	State
Virginia State College; Petersburg, Va. (1882).....	Robert P. Daniel.....	2,532 C	State
Virginia Union University; Richmond, Va. (1865).....	Samuel E. Proctor.....	854 C	Baptist <sup>4</sup>
Viterbo College; La Crosse, Wis. (1931).....	Sister M. Francesca.....	258 F	Catholic <sup>4</sup>
Wabash College; Crawfordsville, Ind. (1832).....	Byron K. Trippet.....	558 M	Private
Wagner Lutheran College; Staten Island, N. Y. (1893).....	David M. Delo.....	1,068 C	Lutheran <sup>4</sup>
Wake Forest College; Winston-Salem, N. C. (1834).....	Harold W. Tribble.....	1,646 C	Baptist
Walla Walla College; College Place, Wash. (1892).....	P. W. Christian.....	1,219 C	7th Day Adven.
Warburg College; Waverly, Iowa (1852).....	C. H. Becker.....	750 C	Lutheran
Washburn University; Topeka, Kans. (1865).....	Bryan S. Stoffer.....	1,537 C	City
Washington, State College of; Pullman, Wash. (1890).....	C. Clement French.....	5,023 C	State
Washington, University of; Seattle, Wash. (1861) <sup>5</sup> .....	Henry Schmitz.....	14,165 C	State
Washington & Jefferson College; Washington, Pa. (1781).....	Boyd C. Patterson.....	585 M	Private
Washington & Lee University; Lexington, Va. (1749).....	Francis P. Gaines.....	1,025 M	Private
Washington College; Chestertown, Md. (1782).....	Daniel Z. Gibson.....	443 C	Private
Washington Missionary College; Washington, D. C. (1904).....	William H. Shephard.....	798 C	7th Day Adven.
Washington State Teachers College; Machias, Maine (1909).....	Lincoln A. Sennett.....	96 C	State
Washington University; St. Louis, Mo. (1853).....	Ethan A. H. Shepley <sup>14</sup> .....	5,393 C	Private
Wayne State University; Detroit, Mich. (1868).....	Clarence B. Hilberry.....	14,298 C	State <sup>46</sup>
Waynesburg College; Waynesburg, Pa. (1849).....	Paul R. Stewart.....	622 C	Presbyterian
Webb Institute of Naval Architecture; Glen Cove, N. Y. (1889).....	R. Adm. F. E. Haeberle <sup>48</sup> .....	68 M	Private
Webster College; Webster Groves, Mo. (1916) <sup>19, 60</sup> .....	Sister M. Collins.....	337 F	Catholic <sup>4</sup>
Wellesley College; Wellesley, Mass. (1870).....	Margaret Clapp.....	1,726 F	Private
Wells College; Aurora, N. Y. (1868).....	Louis J. Long.....	354 F	Private
Wesleyan College; Macon, Ga. (1836).....	B. Joseph Martin.....	432 F <sup>8</sup>	Methodist
Wesleyan University; Middletown, Conn. (1831).....	Victor L. Butterfield.....	901 M <sup>6</sup>	Private
West Liberty State College; West Liberty, W. Va. (1837).....	Paul N. Elbin.....	733 C	State
West Texas State College; Canyon, Tex. (1910) <sup>19</sup> .....	James P. Cornette.....	2,364 C	State
West Virginia Institute of Technology; Montgomery, W. Va. (1895).....	William B. Axtell.....	749 C	State
West Virginia State College; Institute, W. Va. (1891).....	William J. L. Wallace.....	1,358 C	State
West Virginia University; Morgantown, W. Va. (1867).....	Irvin Stewart.....	5,281 C	State
West Virginia Wesleyan College; Buckhannon, W. Va. (1890).....	A. A. Schoolcraft <sup>13</sup> .....	724 C	Methodist
Western Carolina College; Cullowhee, N. C. (1889).....	W. E. Bird.....	1,075 C	State
Western College for Women; Oxford, Ohio (1853).....	Herrick B. Young.....	297 F	Private
Western Illinois State College; Macomb, Ill. (1899).....	Frank A. Beu.....	2,558 C	State
Western Kentucky State College; Bowling Green, Ky. (1906).....	Kelly Thompson.....	2,007 C	State
Western Maryland College; Westminster, Md. (1868).....	Lowell S. Ensor.....	800 C	Methodist <sup>4</sup>
Western Michigan College; Kalamazoo, Mich. (1903).....	Paul V. Sangren.....	5,976 C	State
Western Montana College of Education; Dillon, Mont. (1897).....	Rush Jordan.....	292 C	State
Western Reserve University; Cleveland, Ohio (1826).....	John S. Millis.....	7,030 C	Private
Western State College of Colorado; Gunnison, Colo. (1901).....	P. P. Mickelson.....	832 C	State
Western Washington Coll. of Education; Bellingham, Wash. (1899).....	W. W. Haggard.....	1,664 C	State

Institution, location and (date founded)	Chief executive <sup>1</sup>	No. of students <sup>2</sup>	Control <sup>3</sup>
Westmar College; Le Mars, Iowa (1890).....	D. O. Kime.....	448 C	Evan. Un. Breth.
Westminster College; Fulton, Mo. (1851).....	Robert L. D. Davidson...	344 M	Presbyterian
Westminster College; New Wilmington, Pa. (1852).....	Will W. Orr.....	991 C	Presbyterian
Westminster College; Salt Lake City, Utah (1875).....	J. Richard Palmer.....	453 C	Presb. & Meth. <sup>4</sup>
Westminster Theological Seminary; Philadelphia, Pa. (1929).....	Rev. Prof. C. Van Til <sup>5</sup> ...	71 M <sup>6</sup>	Private
Wheaton College; Norton, Mass. (1834).....	A. Howard Meneely.....	535 F	Private
Wheaton College; Wheaton, Ill. (1860).....	V. Raymond Edman.....	1,717 C	Private
Wheeleock College; Boston, Mass. (1889) <sup>10</sup> .....	Winifred E. Bain.....	385 F	Private
Whittman College; Walla Walla, Wash. (1859).....	Chester C. Maxey.....	793 C	Private
Whittier College; Whittier, Calif. (1901).....	Paul S. Smith.....	1,024 C	Quaker <sup>4</sup>
Whitworth College; Spokane, Wash. (1890).....	Frank F. Warren.....	817 C	Presbyterian <sup>4</sup>
Wichita, University of; Wichita, Kans. (1895).....	Harry F. Corbin.....	4,187 C	City
Wiley College; Marshall, Tex. (1873).....	J. S. Scott, Sr.....	508 C	Methodist
Wilkes College; Wilkes-Barre, Pa. (1933).....	Eugene S. Farley.....	983 C	Private
Willamette University; Salem, Oreg. (1842).....	G. Herbert Smith.....	1,124 C	Methodist <sup>4</sup>
William and Mary, College of; Williamsburg, Va. (1693).....	A. D. Chandler.....	1,580 C	State
William Jewell College; Liberty, Mo. (1849).....	Walter P. Binns.....	634 C	Baptist <sup>4</sup>
William Smith College. See Hobart.....			
Williams College; Williamstown, Mass. (1793).....	James P. Baxter, 3rd.....	1,022 M	Private
Wilmington College; Wilmington, Ohio (1871).....	Samuel D. Marble.....	633 C	Quaker <sup>4</sup>
Wilson College; Chambersburg, Pa. (1869).....	Paul S. Havens.....	350 F	Presbyterian <sup>4</sup>
Wilson Teachers College. See District of Columbia Teachers College.....			
Winthrop College; Rock Hill, S. C. (1886).....	Henry R. Sims.....	1,025 F	State
Wisconsin, University of; Madison, Wis. (1848) <sup>48,49</sup> .....	Edwin B. Fred.....	19,032 C	State
Wisconsin Institute of Technology; Platteville, Wis. (1907).....	Milton A. Melcher.....	215 C	State
Wisconsin State College; Eau Claire, Wis. (1916).....	William R. Davies.....	1,158 C	State
Wisconsin State College; La Crosse, Wis. (1905).....	Rexford S. Mitchell.....	1,356 C	State
Wisconsin State College; Milwaukee, Wis. (1880) <sup>47</sup> .....	J. Martin Klotzsche.....	2,209 C	State
Wisconsin State College; Oshkosh, Wis. (1871).....	Forrest R. Polk.....	1,146 C	State
Wisconsin State College; Platteville, Wis. (1866).....	Chester O. Newlun.....	896 C	State
Wisconsin State College; River Falls, Wis. (1874).....	E. H. Kleinpell.....	876 C	State
Wisconsin State College; Stevens Point, Wis. (1894).....	William C. Hansen.....	1,200 C	State
Wisconsin State College; Superior, Wis. (1896).....	Jim D. Hill.....	1,017 C	State
Wisconsin State College; Whitewater, Wis. (1868).....	Robert C. Williams.....	1,003 C	State
Wittenberg College; Springfield, Ohio (1845).....	Clarence C. Stoughton ..	1,138 C	Lutheran
Wofford College; Spartanburg, S. C. (1854).....	Pendleton Gaines, Jr.....	658 M	Methodist
Woodstock College; Woodstock, Md. (1869).....	Rev. Joseph F. Murphy.....	222 M	Catholic
Wooster, College of; Wooster, Ohio (1866).....	Howard F. Lowry.....	1,074 C	Presbyterian
Worcester Polytechnic Institute; Worcester, Mass. (1865).....	Arthur B. Bronwell.....	885 M	Private
Wyoming, University of; Laramie, Wyo. (1887).....	G. D. Humphrey.....	2,566 C	State
Xavier University; Cincinnati, Ohio (1831).....	V. Rev. P. L. O'Connor.....	3,304 M <sup>6</sup>	Catholic
Xavier University; New Orleans, La. (1925).....	Sister M. Josephina.....	1,185 C	Catholic <sup>4</sup>
Yale University; New Haven, Conn. (1701).....	A. Whitney Griswold.....	7,353 M <sup>6</sup>	Private
Yankton College; Yankton, S. Dak. (1881).....	Adrian Rondileau.....	250 C	Congregational <sup>4</sup>
Yeshiva University; New York, N. Y. (1886).....	Samuel Belkin.....	3,000 Co	Jewish <sup>4</sup>
Youngstown University; Youngstown, Ohio (1908).....	Howard W. Jones.....	4,339 C	Private

<sup>1</sup> President, unless otherwise indicated. <sup>2</sup> M—Male; F—Female; C—Coeducational; Co—Co-ordinate. <sup>3</sup> Control, unless otherwise indicated. <sup>4</sup> Affiliated but not controlled. <sup>5</sup> Fall semester of 1955. <sup>6</sup> Enrollment includes women who are admitted for special courses and/or graduate work. <sup>7</sup> Barnard College is women's undergraduate school of Columbia University. <sup>8</sup> Enrollment includes men who are admitted for special courses and/or graduate work. <sup>9</sup> Duplicates deducted. <sup>10</sup> Including Hastings College of the Law. <sup>11</sup> Fall semester of 1952. <sup>12</sup> Pembroke College is women's undergraduate school of Brown University. <sup>13</sup> Acting President. <sup>14</sup> Chancellor. <sup>15</sup> Affiliated with Congregational, Baptist and Episcopal churches. <sup>16</sup> Rector. <sup>17</sup> Dean. <sup>18</sup> Provost. <sup>19</sup> Spring semester of 1955. <sup>20</sup> Quasi-public in control. <sup>21</sup> There are also campuses at St. Paul and Duluth. <sup>22</sup> Coeducational in p.m.; male only in a.m. <sup>23</sup> Mary Washington College is constituent school for women of University of Virginia. <sup>24</sup> Will become coeducational, probably in Sept. 1957. <sup>25</sup> General Church of the New Jerusalem (Swedenborgian). <sup>26</sup> Rutgers College is for men only; Douglass College, formerly New Jersey College for Women, is for women only; campuses at Newark and Camden are coeducational. <sup>27</sup> Date of founding as State Teachers College; founded 1855 as City Normal School. <sup>28</sup> Superintendent. <sup>29</sup> Female only at Park Ave. bldg.; coeducational at Bronx bldg. <sup>30</sup> Year of consolidation. <sup>31</sup> Newcomb College is constituent school for women of Fane University. <sup>32</sup> Snow College and College of Southern Utah are branches of Utah State Agricultural College. <sup>33</sup> Maintained by individual Christian Scientists for sons and daughters of Christian Scientists. <sup>34</sup> Affiliated with Harvard University. <sup>35</sup> Radford College is women's division of Virginia Polytechnic Institute. <sup>36</sup> Schools of law and business administration are coeducational. <sup>37</sup> Other campuses are located at El Paso, Galveston, Houston and Dallas. <sup>38</sup> Controlled by Methodist, Presbyterian and Congregational churches. <sup>39</sup> Does not include enrolment of Texas Western College at El Paso; see that entry. <sup>40</sup> Part of University of Texas. <sup>41</sup> Jackson College is Dept. of Women (Lab. Arts) for Tufts College. <sup>42</sup> Permanent site, now under construction, will be 7 mi. N. of Colorado Springs. <sup>43</sup> Total authorized strength is 2,496. <sup>44</sup> Acting Director. <sup>45</sup> Acting Provost. <sup>46</sup> Control to pass from city to state over 3-yr. period beginning July 1, 1956. <sup>47</sup> Director. <sup>48</sup> Administrator. <sup>49</sup> Professional schools located at Baltimore; Maryland State College located at Princess Anne. <sup>50</sup> Fontbonne, Maryville and Webster Colleges are corporate colleges of St. Louis University. <sup>51</sup> Presiding Fellow. <sup>52</sup> Includes New York State College of Ceramics, contract unit of State University of New York. <sup>53</sup> There are also campuses at San Dimas and Pomona. <sup>54</sup> Spring semester of 1954. <sup>55</sup> Also operates New York State Agricultural Experiment Station in Geneva, N. Y., and Cornell Aeronautics Laboratory in Buffalo. <sup>56</sup> Winter quarter of 1955-56. <sup>57</sup> Established by merging of Miner Teachers College (founded 1893) and Wilson Teachers College (1873). <sup>58</sup> Formerly Michigan State Normal College. <sup>59</sup> Chairman, Administrative Committee. <sup>60</sup> Previously men were admitted on nonresident basis. <sup>61</sup> Hobart College is for men; William Smith College is for women. <sup>62</sup> Legally public; administered and financed privately. <sup>63</sup> Teachers Institute and Seminary College are coeducational; Rabbinical School and Cantors Institute are male only. <sup>64</sup> College is independent of church affiliation; theological seminary has Presbyterian affiliation. <sup>65</sup> Branch campus at Sault Ste. Marie, Mich. <sup>66</sup> Formerly Michigan State College. <sup>67</sup> As of Sept. 1956, Wisconsin State College at Milwaukee merged with University of Wisconsin Extension Division there to form Milwaukee branch of University of Wisconsin. <sup>68</sup> Coeducational in graduate schools.

## GEOGRAPHY

## Miscellaneous Data

Source: U. S. Geological Survey.

Highest point: Mt. Whitney, Calif.*	14,495 ft.
Lowest point: Death Valley, Calif.*	282 ft. below sea level
Most northern point: Lake of the Woods projection, Minn.	49° 23' 04.5" N. lat.
Most southern point: Cape Sable, Fla.	25° 07' N. lat.
Most eastern point: West Quoddy Head, Maine	66° 57' W. long.
Most western point: Cape Alava, Wash.	124° 44' W. long.
Places farthest apart: Point Arena, Calif., to West Quoddy Head, Maine	2,897 mi.
Geographic center: near Lebanon, Smith County, Kans.	{ 39° 50' N. lat. 98° 35' W. long.
Northern boundary: Canada and Great Lakes	3,987 mi.
Southern boundary: Mexico	2,013 mi.

\* The highest and lowest points in the U. S. are 86 mi. apart.

## Mountain Peaks in the U. S. Over 14,000 Feet Above Sea Level

Source: U. S. Geological Survey.

Name of summit	State	Height, ft.	Name of summit	State	Height, ft.
Whitney	California	14,495	Sneffels	Colorado	14,154
Elbert	Colorado	14,431	San Luis	Colorado	14,141
Harvard	Colorado	14,420	Democrat	Colorado	14,142
Massive	Colorado	14,418	Capitol	Colorado	14,137
Rainier	Washington	14,408	Lindsey	Colorado	14,121
Williamson	California	14,384	Liberty Cap	Washington	14,112
La Plata	Colorado	14,340	Pikes Peak	Colorado	14,110
Blanca	Colorado	14,317	Kit Carson	Colorado	14,104
Uncompahgre	Colorado	14,301	Windom	Colorado	14,091
Crestone	Colorado	14,291	Eolus (Aeolus)	Colorado	14,086
Lincoln	Colorado	14,284	Snowmass	Colorado	14,077
Grays	Colorado	14,274	Columbia	Colorado	14,077
Antero	Colorado	14,269	Gulebra	Colorado	14,066
Torreyes	Colorado	14,264	Missouri	Colorado	14,067
Evans	Colorado	14,260	Sunlight	Colorado	14,066
Castle	Colorado	14,259	Split	California	14,052
Longs	Colorado	14,255	Red Cloud	Colorado	14,051
Quandary	Colorado	14,252	Handies	Colorado	14,042
Wilson	Colorado	14,246	Bierstadt	Colorado	14,044
White	California	14,246	Humboldt	Colorado	14,044
North Palisade	California	14,242	Langley	California	14,041
Cameron	Colorado	14,238	Middle Palisade	California	14,044
Shavano	Colorado	14,229	Little Bear	Colorado	14,044
Princeton	Colorado	14,197	Sherman	Colorado	14,037
Belford	Colorado	14,197	Stewart	Colorado	14,033
Yale	Colorado	14,196	Muir	California	14,022
Creston Needle	Colorado	14,191	Tyndall	California	14,022
Russell	California	14,190	Sunshine	Colorado	14,012
Bross	Colorado	14,169	Wetterhorn	Colorado	14,017
Sill	California	14,162	Wilson	Colorado	14,017
Shasta	California	14,162	Huron	Colorado	14,003
El Diente	Colorado	14,159	Barnard	California	14,002
Maroon	Colorado	14,158	Pyramid	Colorado	14,000
Tabeguache	Colorado	14,155	Grizzly	Colorado	14,000
Oxford	Colorado	14,153	North Maroon	Colorado	14,000
Point Success	Washington	14,150			

## The Continental Divide

The Continental Divide is a ridge of high ground which runs irregularly north and south through the Rocky Mountains and separates eastward-flowing from westward-

flowing streams. The waters which flow eastward empty into the Atlantic Ocean, chiefly by way of the Gulf of Mexico; those which flow westward empty into the Pacific.



# Highest, Lowest, and Average Altitudes in the United States

Source: U. S. Geological Survey.

State	Average elevation, ft.	Highest point	Elevation, ft.	Lowest point	Elevation, ft.
Alabama.....	500	Cheaha Mountain.....	2,407	Gulf of Mexico.....	Sea level
Arizona.....	4,100	Humphreys Peak.....	12,670	Colorado River.....	100
Arkansas.....	650	Blue Mountain & Magazine Mountain.....	2,800	Ouachita River.....	55
California.....	2,900	Mount Whitney.....	14,495	Death Valley.....	282*
Colorado.....	6,800	Mount Elbert.....	14,431	Arkansas River.....	3,350
Connecticut.....	500	N. Bdy.-Mt. Frissell.....	2,380	Long Island Sound.....	Sea level
Delaware.....	60	Ebright Road.....	450	Atlantic Ocean.....	Sea level
D. C.....	150	Tenleytown.....	420	Potomac River.....	Sea level
Florida.....	100	Sec. 30, T6N, R20W.....	345	Atlantic Ocean.....	Sea level
Georgia.....	600	Brasstown Bald.....	4,784	Atlantic Ocean.....	Sea level
Idaho.....	5,000	Borah Peak.....	12,655	Snake River.....	720
Illinois.....	600	Charles Mound.....	1,241	Mississippi River.....	279
Indiana.....	700	Greensfork Township.....	1,240	Ohio River.....	320
Iowa.....	1,100	In Osceola County.....	1,675	Mississippi River.....	480
Kansas.....	2,000	In T15S R43W.....	4,135	Verdigris River.....	700
Kentucky.....	750	Black Mountain.....	4,145	Mississippi River.....	257
Louisiana.....	100	Driskill Mountain.....	535	New Orleans.....	5*
Maine.....	600	Mount Katahdin.....	5,268	Atlantic Ocean.....	Sea level
Maryland.....	350	Backbone Mountain.....	3,360	Atlantic Ocean.....	Sea level
Massachusetts.....	500	Mount Greylock.....	3,491	Atlantic Ocean.....	Sea level
Michigan.....	900	In Baraga County.....	1,980	Lake Erie.....	572
Minnesota.....	1,200	Misquah Hills.....	2,230	Lake Superior.....	602
Mississippi.....	300	Woodall Mountain.....	806	Gulf of Mexico.....	Sea level
Missouri.....	800	Taum Sauk Mountain.....	1,772	St. Francis River.....	230
Montana.....	3,400	Granite Peak.....	12,799	Kootenai River.....	1,800
Nebraska.....	2,600	Epworth Township.....	5,340	Southeast corner of State.....	840
Nevada.....	5,500	Boundary Peak, White Mountains.....	13,145	Colorado River.....	470
New Hampshire.....	1,000	Mount Washington.....	6,288	Atlantic Ocean.....	Sea level
New Jersey.....	250	High Point.....	1,801	Atlantic Ocean.....	Sea level
New Mexico.....	5,700	Wheeler Peak.....	13,160	Red Bluff Reservoir.....	2,817
New York.....	1,000	Mount Marcy.....	5,344	Atlantic Ocean.....	Sea level
North Carolina.....	700	Mount Mitchell.....	6,684	Atlantic Ocean.....	Sea level
North Dakota.....	1,900	Black Butte.....	3,468	Red River.....	750
Ohio.....	850	Campbell Hill.....	1,550	Ohio River.....	433
Oklahoma.....	1,300	Black Mesa.....	4,978	Red River.....	300
Oregon.....	3,300	Mount Hood.....	11,245	Pacific Ocean.....	Sea level
Pennsylvania.....	500	Mt. Davis, Negro Mountains.....	3,213	Delaware River.....	Sea level
Rhode Island.....	200	Jerimoth Hill.....	812	Atlantic Ocean.....	Sea level
South Carolina.....	350	Sassafras Mountain.....	3,560	Atlantic Ocean.....	Sea level
South Dakota.....	2,200	Harney Peak.....	7,242	Big Stone Lake.....	962
Tennessee.....	900	Clingmans Dome.....	6,642	Mississippi River.....	182
Texas.....	1,700	Guadalupe Peak.....	8,751	Gulf of Mexico.....	Sea level
Utah.....	6,100	Kings Peak.....	13,498	Beaverdam Creek.....	2,000
Vermont.....	1,000	Mount Mansfield.....	4,393	Lake Champlain.....	95
Virginia.....	950	Mount Rogers.....	5,720	Atlantic Ocean.....	Sea level
Washington.....	1,700	Mount Rainier.....	14,408	Pacific Ocean.....	Sea level
West Virginia.....	1,500	Spruce Knob.....	4,860	Potomac River.....	240
Wisconsin.....	1,050	Sugarbush Hill.....	1,951	Lake Michigan.....	581
Wyoming.....	6,700	Gannett Peak.....	13,785	Belle Fourche River.....	3,100

\* Below sea level.

## Forest Resources of the United States

Source: U. S. Forest Service.

### U. S. Forest Land in Acres, 1953

Old growth .....	46,055,000
Young growth saw timber ...	132,561,000
Pole timber stands .....	169,408,000
Seedling and sapling stands .	94,709,000
Nonstocked and other areas .	41,607,000
Total, commercial forest land	484,340,000
Noncommercial forest .....	163,346,000
Total, all forest land .....	647,686,000

Nearly 1/3 of the U. S. is forest land including over 800 different kinds of trees. Commercial areas include land capable of producing timber of commercial quantity and quality, and available now or prospectively for such use. Almost all the old-growth forest is in the West. Noncommercial areas include alpine, semidesert, chaparral and other forest types of low timber productivity, though much of it is important for watershed protection.

## Rivers of the U. S.

Source: U. S. Geological Survey.

(300 or more miles long)

**ALABAMA** (315 mi.): From junction of Tallapoosa R. and Coosa R. in Alabama to junction with Tombigbee R. to form Mobile R. and Tensaw R.

**ALLEGHENY** (325 mi.): From Potter Co. in Pennsylvania to junction with Monongahela R. at Pittsburgh to form Ohio R.

**ARKANSAS** (1,450 mi.): From Lake Co. in Colorado to Mississippi R. in Arkansas.

**BIG BLACK** (330 mi.): From Webster Co. in Mississippi to Mississippi R.

**BIG HORN** (336 mi.): From junction of Popo Agie R. and Wind R. in Wyoming to Yellowstone R. in Montana.

**BRAZOS** (870 mi.): From junction of Salt Fork and Clear Fork in Texas to Gulf of Mexico.

**CANADIAN** (906 mi.): From Colfax Co. in New Mexico to Arkansas R. in Oklahoma.

**CEDAR** (329 mi.): From south central Minnesota to Iowa R. in Iowa.

**CHATTAHOOCHEE** (410 mi.): From Towns Co. in Georgia to junction with Flint R. to form Apalachicola R.

**CIMARRON** (600 mi.): From Colfax Co. in New Mexico to Arkansas R. in Okla.

**CLARK FORK** (c. 300 mi.): From Silver Bow Co. in Montana to Pend Oreille Lake in Idaho.

**COLORADO** (1,450 mi.): From Grand Co. in Colorado to Gulf of California in Mexico.

**COLORADO** (840 mi.): From Dawson Co. in Texas to Matagorda Bay.

**COLUMBIA** (1,270 mi.): From Columbia Lake in British Columbia to Pacific Ocean between Oregon and Washington.

**CONNECTICUT** (407 mi.): From Connecticut Lakes in New Hampshire to Long Island Sound in Connecticut.

**CUMBERLAND** (687 mi.): From junction of forks in Harlan Co. in Kentucky to Ohio R.

**DAKOTA** (Sometimes called **JAMES**) (710 mi.): From Wells Co. in North Dakota to Missouri R. in South Dakota.

**DES MOINES** (327 mi.): From junction of forks in Humboldt Co. in Iowa to Mississippi R.

**GILA** (630 mi.): From southwest New Mexico to Colorado R. in Arizona.

**GREEN** (360 mi.): From Lincoln Co. in Kentucky to Ohio R. in Indiana.

**GREEN** (730 mi.): From Sublette Co. in Wyoming to Colorado R. in Utah.

**HUDSON** (306 mi.): From Essex Co. in New York to Upper New York Bay between New York and New Jersey.

**JAMES** (340 mi.): From junction of Jackson R. and Cowpasture R. in Virginia to Chesapeake Bay.

**LITTLE COLORADO** (300 mi.): From Apache Co. in Arizona to Colorado R.

**LITTLE MISSOURI** (560 mi.): From northeast Wyoming to Missouri R. in North Dakota.

**MILK** (625 mi.): From Glacier Co. in Montana to Missouri R.

**MINNESOTA** (332 mi.): From Big Stone Lake between Minnesota and South Dakota to Mississippi R. at St. Paul.

**MISSISSIPPI** (2,470 mi.): From Lake Itasca in Minn. to Gulf of Mexico in La.

**MISSOURI** (2,475 mi.): From junction of Jefferson R., Madison R., and Gallatin R. in Montana to Mississippi R. near St. Louis.

**NEOSHO** (460 mi.): From Morris Co. in Kansas to Arkansas R. in Oklahoma.

**NIOBRARA** (431 mi.): From Niobrara Co. in Wyoming to Missouri R. in Nebraska.

**NORTH CANADIAN** (760 mi.): From Union Co. in New Mexico to Canadian R. in Oklahoma.

**NORTH PLATTE** (618 mi.): From Jackson Co. in Colorado to junction with So. Platte R. in Nebraska to form Platte R.

**NUECES** (338 mi.): From near Edwards Real Co. border in Texas to Nueces Bay.

**OHIO** (981 mi.): From junction of Allegheny R. and Monongahela R. at Pittsburgh to Mississippi R. between Illinois and Kentucky.

**OSAGE** (500 mi.): From junction of Elm Creek and Onion Creek in Kansas to Missouri R. in Missouri.

**OUACHITA** (605 mi.): From Polk Co. in Arkansas to Black R. in Louisiana.

**PEARL** (490 mi.): From Neshoba Co. in Mississippi to Gulf of Mexico between Mississippi and Louisiana.

**PECOS** (735 mi.): From Mora Co. in New Mexico to Rio Grande in Texas.

**PLATTE** (310 mi.): From junction of North Platte R. and South Platte R. in Nebraska to Missouri below Omaha.

**PLATTE** (c. 300 mi.): From Union Co. in Iowa to Missouri R. in Missouri.

**POWDER** (375 mi.): From junction of forks in Johnson Co. in Wyoming to Yellowstone R. in Montana.

**RED** (1,018 mi.): From junction of forks in Tillman Co. in Oklahoma to Mississippi R. in Louisiana.

**RED** (Sometimes called **RED RIVER OF THE NORTH**) (545 mi.): From junction of Otter Tail R. and Bois de Sioux R. in Minnesota to Lake Winnipeg in Manitoba.

**REPUBLICAN** (445 mi.): From eastern Colorado to junction with Smoky Hill R. in Kansas to form Kansas R.

**RIO GRANDE** (1,800 mi.): From San Juan Co. in Colorado to Gulf of Mexico between Texas and Mexico.

**ROANOKE** (380 mi.): From junction of forks in Montgomery Co. in Virginia to Albemarle Sound in North Carolina.

**ROCK** (300 mi.): From Washington Co. in Wisconsin to Mississippi R. in Illinois.

**SABINE** (380 mi.): From junction of forks in Hunt Co. in Texas to Sabine Lake between Texas and Louisiana.

**SACRAMENTO** (382 mi.): From Siskiyou Co. in California to Suisun Bay.

**SAINT FRANCIS** (425 mi.): From Iron Co. in Missouri to Mississippi R. in Arkansas.

**SALMON** (420 mi.): From Custer Co. in Idaho to Snake R.

**SAN JOAQUIN** (350 mi.): From junction of forks in Madera Co. in California to Sacramento R.

**SAN JUAN** (360 mi.): From Archuleta Co. in Colorado to Colorado R. in Utah.

**SAVANNAH** (314 mi.): From junction of Tugaloo R. and Seneca R. in South Carolina to Atlantic Ocean between Georgia and South Carolina.

**SMOKY HILL** (540 mi.): From Cheyenne Co. in Colorado to junction with Republican R. in Kansas to form Kansas R.

**SNAKE** (1,038 mi.): From Yellowstone National Park in Wyoming to Columbia R. in Washington.

**SOUTH PLATTE** (424 mi.): From Park Co. in Colorado to junction with North Platte R. in Nebraska to form Platte R.

**SUSQUEHANNA** (444 mi.): From Otsego Co. in New York to Chesapeake Bay in Maryland.

**TALLAHATCHIE** (301 mi.): From Tippah Co. in Mississippi to junction with Yazoo R. to form Yazoo R.

**TENNESSEE** (652 mi.): From junction of Holston R. and French Broad R. near Knoxville to Ohio R. in Kentucky.

**TOMBIGBEE** (409 mi.): From junction of forks near Amory, Mississippi, to junction with Alabama R. in Alabama to form Mobile R. and Tensaw R.

**TRINITY** (360): From junction of forks in Kaufman Co. in Texas to Galveston Bay.

**WABASH** (475 mi.): From Darke Co. in Ohio to Ohio R. between Illinois and Indiana.

**WASHITA** (500 mi.): From Hemphill Co. in Texas to Red R. in Oklahoma.

**WHITE** (690 mi.): From Madison Co. in Arkansas to Mississippi R.

**WISCONSIN** (430 mi.): From Vilas Co. in Wisconsin to Mississippi R.

**YELLOWSTONE** (671 mi.): From Park Co. in Wyoming to Missouri R. in North Dakota.

## Coastline of the United States

Source: U. S. Coast and Geodetic Survey.

State	Lengths in statute miles		
	General coastline*	Tidal shoreline, general†	Tidal shoreline, detailed‡
Maine.....	228	676	3,478
New Hampshire.....	13	14	131
Massachusetts.....	192	453	1,519
Rhode Island.....	40	156	384
Connecticut.....	...	96	618
New York.....	127	470	1,850
New Jersey.....	130	398	1,792
Pennsylvania.....	...	...	89
Delaware.....	28	79	381
Maryland.....	31	452	3,190
Virginia.....	112	567	3,315
North Carolina.....	301	1,030	3,375
South Carolina.....	187	758	2,876
Georgia.....	100	603	2,344
Florida (Atlantic).....	399	618	3,035
Total Atlantic coast...	1,888	6,370	28,377
Florida (Gulf).....	798	1,658	5,391
Alabama.....	53	199	607
Mississippi.....	44	155	359
Louisiana.....	397	985	7,721
Texas.....	367	1,100	3,359
Total Gulf coast.....	1,659	4,097	17,437
California.....	840	1,190	3,427
Oregon.....	296	312	1,410
Washington.....	157	908	3,026
Total Pacific coast....	1,293	2,410	7,863
Total U. S.....	4,840	12,877	53,677

\* Figures are lengths of general outline of seacoast. Measurements made with unit measure of 30 minutes of latitude on charts as near scale of 1-1,200,000 as possible. Shoreline of bays and sounds is included to point where they narrow to width of unit measure, and distance across at such point is included. † Measurements made with unit measure of 3 statute miles on charts of 1:200,000 and 1:400,000 scale when available. Shoreline of bays, sounds and other bodies of water included to point where they narrow to width of 3 statute miles, and distance across at such point is included. ‡ Figures obtained in 1939-40 with recording measure on largest scale maps and charts then available. Shoreline of bays, sounds and other bodies of water included to head of tide-water, or to point where they narrow to width of 100 feet.

## U. S. Water Area\*

Source: U. S. Bureau of the Census.

	Sq. mi.
Atlantic Ocean .....	2,298
Chesapeake Bay .....	3,237
Delaware Bay .....	665
Erie, Lake .....	5,002
Georgia and Juan de Fuca, Straits of .....	1,610
Huron, Lake .....	8,975
Long Island Sound .....	1,299
Mexico, Gulf of .....	3,837
Michigan, Lake .....	22,178
New York Harbor .....	92
Ontario, Lake .....	3,033
Pacific Ocean .....	343
Puget Sound .....	561
St. Clair, Lake .....	116
Superior, Lake .....	21,118
Total .....	74,364

\* Other than inland water.



## WEATHER AND CLIMATE

## Devastating North Atlantic Hurricanes of the 20th Century

The following is a selected list of North Atlantic hurricanes based on casualties, damage and general public interest. Facts about each storm are taken from Weather Bureau records, although in some cases only estimates of wind speed are available. Data given in this list pertain only to U. S. land areas except where indicated otherwise.

Date	Areas hardest hit	Land stations with highest wind speed	Deaths (U. S. only)	Est. damage (millions)	Remarks
1900, Sept. 8.....	Galveston, Tex.	Galveston, Tex. (120* mph)	6,000	\$ 20	Damage due to both winds and storm wave. Galveston Is. inundated.
1909, Sept. 10-12.....	La.; Miss.	New Orleans, La. (68 mph)	350	5	Winds 50-75 mi. W of New Orleans, where deaths occurred, were much stronger than 68 mph.
1915, Aug. 5-24.....	East Tex.; La.	Galveston, Tex. (120 mph)	275	50	Water 5-6 ft. deep in Galveston business district. 90% of homes demolished. Warnings issued well ahead of time.
1915, Sept. 22-Oct. 2..	Mid-Gulf Coast	Burrwood, La. (140 mph)	275	13	Many casualties due to persons insisting on staying in low-lying areas despite warnings.
1916, June 29-July 10.	Miss. to Fla.; N. C.	Mobile, Ala. (107 mph)	4	3	Altapass, N. C., had 22.22 in. of rain within 24 hrs.
1919, Sept. 2-14.....	Fla.; La.; Tex.	Sand Key, Fla. (84† mph)	284	22	488 persons drowned at sea.
1926, Sept. 6-22.....	Fla.; Ala.	Miami Beach, Fla. (132 mph)	100	105	Most deaths were in Miami area. Said to have been one of most destructive storms of century.
1928, Sept. 6-20.....	Southern Fla.	Lake Okeechobee, Fla. (75† mph)	1,836	25	1,870 injured. Nearly all deaths were in Lake Okeechobee area. Winds estimated as high as 160 mph caused Lake to overflow into populated areas.
1935, Aug. 31-Sept. 8.	Southern Fla.	Tampa, Fla. (75 mph)	376	6	Sustained winds over Florida Keys est. 150-200 mph. Remembered as "Labor Day Storm," one of most violent on record.
1935, Oct. 30-Nov. 8...	Southern Fla.	Miami, Fla. (75 mph)	5	E	Called "The Yankee Storm" because it moved in from N. E. It was of small diameter and its wind covered only narrow band.
1938, Sept. 16-22.....	Long Island, N. Y. Southern New Eng.	Blue Hills Obs., Mass. (186 mph)	600	250	Unusually destructive. Storm center moved as fast as 56 mph at times. 1,754 injured. Damage est. as high as \$330 million.
1940, Aug. 5-15.....	Ga.; S. C.; N. C.	Savannah, Ga. (73 mph)	50	3	30 of deaths were due to disastrous flooding inland as far west as Tennessee.
1941 Sept. 18-25.....	Texas	(See Remarks)	4	E	Winds were est. at over 100 mph at several points along Texas coast. Much of damage was to crops.
1944, Sept. 8-16.....	N. C. to New England	Cape Henry, Va. (134 mph)	46	100	344 deaths at sea. Shipping lanes were crowded with war-time activity.
1944, Oct. 13-21.....	Fla. to Carolinas	Dry Tortugas Is. (120 mph)	18	100	About 300 were killed in Cuba area before storm reached U. S. Evacuation of thousands from threatened areas in Fla. prevented higher toll.

Date	Areas hardest hit	Land stations with highest wind speed	Deaths (U. S. only)	Est. damage (millions)	Remarks
1945, Aug. 24-29.....	Texas	Seadrift, Tex. (135 mph)	3	20	Several other coastal localities recorded 135 mph. One of most intense hurricanes in Texas.
1945, Sept. 11-19.....	Fla.; Ga.; S. C.	Carysfort Reef Light, Fla. (138 mph)	4	60	22 casualties in Bahamas. Damage mostly in Dade Co., Fla. Evacuation of 50,000 persons prevented heavier loss of life.
1947, Sept. 10-19.....	Fla.; Mid-Gulf Coast	Hillsboro Light, Fla. (155 mph)	51	110	Damage especially heavy along Gulf Coast. Onshore winds resulted in high water.
1948, Sept. 18-25.....	Florida	Key West, Fla. (122 mph)	3	12	10 casualties in Cuba.
1949, Aug. 23-29.....	Fla. to Carolinas	Jupiter, Fla. (153 mph)	2	52	Center of storm crossed Lake Okeechobee. Levees held back water, which rose 12 ft. (Compare casualties with 1928.)
1950, Oct. 15-19.....	Florida	Miami, Fla. (122 mph)	4	28	"KING"—small but violent storm. Struck Miami, then moved up Florida peninsula.
1954, Aug. 26-31.....	N. C. to Maine	Block Island, R. I. (135 mph)	60	461	"CAROL"—more damage than any other single storm on record for U. S. Water and high waves flooded low-lying areas 1,000 injuries in Long Island-New England area.
1954, Sept. 6-11.....	N. J. to Maine	Blue Hill Obs., Mass. (101 mph)	21	43	"EDNA"—wind est. up to 135 mph at Massachusetts Bay.
1954, Oct. 5-16.....	S. C. to N. Y.	(See Remarks)	95	252	"HAZEL"—several N. C. localities had winds of 130-150 mph with unusually heavy wave damage resulting. Est. 400-1,000 casualties in Haiti. In Canada there were 78 deaths, mostly due to flooding.
1955, Aug. 11-13.....	N. C. to Pa. and N. Y.	Ft. Macon, N. C. (100 mph)	49	20	"CONNIE"—center passed over Morehead City and Beaufort flooding these cities. 12.35 in. of rain in New York City.
1955, Aug. 17-19.....	N. C. to New England	Wilmington, N. C. (74 mph)	About 200	1,500	"DIANE"—worst floods in history in Southern New England. 16 in. of rain in Hartford area.
1955, Sept. 19-20.....	North Carolina	Beaufort, N. C. (120* mph)	7	160	"IONE"—center passed over Morehead City and Beaufort but lost force rapidly thereafter. Recurved to sea south of Norfolk.
1956, Sept. 24-26.....	Northwest Florida	Burrwood, La. (90-110 mph) Pensacola, Fla. (88 mph)	16	(†)	"FLOSSY"—center passed in northeasterly direction over Burrwood, La., at 4 a.m. and over Pensacola, Fla., at 3 p.m. on Sept. 24. Lost force rapidly thereafter, but dumped heavy rains in southeastern states.

\* Estimated. † Wind measuring equipment disabled at speed indicated. ‡ Not available.

### Tropical Storms and Hurricanes, 1887-1954

	Jan.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
No. of tropical storms.....	1	9	27	32	98	176	128	32	3	506
No. of tropical storms which reached hurricane intensity.....	1	1	11	15	61	109	53	8	1	260

## Groups of Tornadoes That Caused Outstanding Damage

Source: Data for 1884-1953, except Sept. 1, 1952, reprinted from *Tornadoes of the United States* by S. D. Flora. Copyright 1954, by University of Oklahoma Press. Used by permission.

Date	Tornadoes in group	Deaths	Property losses	States in which storms occurred
1884, Feb. 19.....	60	800	*	Mississippi, Alabama, North and South Carolina, Tennessee, Kentucky, Indiana
1917, May 26-27.....	*	249	\$ 5,555,000	Illinois, Indiana, Arkansas, Kentucky, Tennessee, Alabama, Mississippi
1920, Apr. 20.....	6	220	3,525,000	Mississippi, Alabama, Tennessee
1924, Apr. 29-30.....	22	115	4,372,300	Oklahoma, Arkansas, Alabama, Georgia, Louisiana, North and South Carolina, Virginia
1924, June 28.....	4	96	13,050,000	Ohio and Pennsylvania
1925, Mar. 18.....	8	792	17,872,000	Missouri, Illinois, Indiana, Kentucky, Tennessee, Alabama
1927, May 8-9.....	36	227	7,877,000	Texas, Louisiana, Missouri, Nebraska, Indiana, Michigan
1932, Mar. 21.....	27	321	5,514,000	Alabama, Mississippi, Georgia, Tennessee
1936, Apr. 5-6.....	22	498	21,800,000	Arkansas, Alabama, Tennessee, Georgia, South Carolina
1944, June 23.....	4	153	5,160,000	Pennsylvania, West Virginia, Maryland
1947, Apr. 9-10.....	8	167	10,030,750	Texas, Oklahoma, Kansas
1952, Mar. 21-22.....	31	343	15,327,100	Arkansas, Tennessee, Missouri, Mississippi, Alabama, Kentucky
1952, Sept. 1.....			38 B-36's	Texas (Fort Worth)
1953, June 7-9.....	12	234	93,230,840	Michigan, Ohio, and New England states.
1954, Mar. 13.....	4	8	9,000,000	Georgia. Heavy damage at Lawson Air Base and Ft. Benning.
1955, Mar. 11.....	5	0	920,000	Indiana, Ohio
1955, May 25.....	13	102	11,747,500	Oklahoma and Kansas. Completely destroyed Udall, Kans., and part of Blackwell, Okla.
1956, Apr. 3.....	1	18	10,500,000	Michigan
1956, Apr. 15.....	(†)	25	1,500,000	Alabama
1956, May 12.....	(†)	6	4,000,000	Flint, Mich.

\* Not definitely known; believed to be large. † No information available.

## CLIMATE OF SELECTED U. S. CITIES

Source: U. S. Weather Bureau.

Asterisk (\*) indicates less than one-half; T—indicates trace; TH—indicates trace of hail; n.a.—indicates not available.

Month	Temperature				Precipitation			% possible sunshine	% relative humidity at noon
	Average maximum	Average minimum	Absolute maximum	Absolute minimum	Amount	Snowfall, inches	Days with precipitation		
BAKERSFIELD, CALIFORNIA									
January.....	57	37	82	14	1.02	T	6	n.a.	70
April.....	76	50	100	30	0.75	T	4	n.a.	46
July.....	101	67	118	46	0.01	0.0	*	n.a.	29
October.....	81	52	104	31	0.37	0.0	2	n.a.	40
Annual.....	79	51	118	13	6.36	0.1	34	n.a.	47
CARIBOU, MAINE									
January.....	18	-1	51	-32	2.24	21.8	14	n.a.	69
April.....	43	26	80	2	2.63	6.1	13	n.a.	59
July.....	75	54	95	40	4.03	TH	13	n.a.	60
October.....	51	33	79	14	3.47	1.7	11	n.a.	60
Annual.....	47	28	96	-41	35.88	102.3	153	n.a.	63
CHICAGO, ILLINOIS									
January.....	33	17	67	-20	1.84	8.6	11	44	70
April.....	58	39	91	17	2.82	1.0	11	57	58
July.....	85	64	105	49	2.73	0.0	9	73	55
October.....	64	44	91	14	2.56	0.1	9	61	56
Annual.....	59	41	105	-23	32.72	33.8	124	59	61



Month	Temperature				Precipitation			% possible sunshine	% relative humidity at noon
	Average maximum	Average minimum	Absolute maximum	Absolute minimum	Amount	Snowfall, inches	Days with precipitation		
DALLAS, TEXAS									
January.....	55	36	88	—3	2.47	1.2	8	51	62
April.....	77	56	96	30	3.87	7	8	63	53
July.....	95	76	111	56	1.97	0.0	5	79	49
October.....	80	58	100	26	2.67	0.0	6	69	50
Annual.....	77	56	111	—3	34.42	2.4	81	67	53

## DENVER, COLORADO

January.....	42	16	76	-29	0.50	6.0	5	67	42
April.....	61	34	86	4	2.05	9.5	9	63	38
July.....	87	58	102	42	1.36	TH	9	69	30
October.....	66	37	90	-2	1.01	4.0	6	71	33
Annual.....	64	36	105	-29	14.20	56.1	86	67	37

## DULUTH, MINNESOTA

January.....	19	2	55	-41	1.01	11.1	10	46	74
April.....	47	30	88	-5	2.21	4.8	9	58	60
July.....	76	56	106	41	3.31	TH	11	68	61
October.....	54	37	85	8	1.96	1.2	10	47	61
Annual.....	48	30	106	-41	26.63	55.8	126	55	66

## GREAT FALLS, MONTANA

January.....	32	14	62	-33	0.55	7.6	7	48	63
April.....	56	33	87	-6	0.95	4.0	8	63	46
July.....	84	55	102	42	1.35	TH	8	79	37
October.....	59	37	91	7	0.72	2.0	6	59	47
Annual.....	56	34	105	-35	14.03	53.5	97	62	51

## KANSAS CITY, MISSOURI

January.....	39	21	75	-20	1.43	4.6	7	55	64
April.....	66	46	95	16	3.61	0.8	11	60	53
July.....	91	71	112	53	2.83	0.0	9	77	49
October.....	70	49	98	17	2.93	0.2	7	67	51
Annual.....	66	46	113	-22	35.31	20.5	104	65	55

## LOS ANGELES, CALIFORNIA (CITY OFFICE)

January.....	65	45	90	28	2.38	T	6	70	45
April.....	71	52	100	36	1.17	0.0	4	68	52
July.....	83	62	109	49	T	0.0	*	78	52
October.....	77	56	104	40	0.50	0.0	2	76	47
Annual.....	74	54	110	28	14.54	T	39	73	49

## MIAMI, FLORIDA

January.....	74	63	83	31	2.15	0.0	8	66	59
April.....	80	69	91	44	3.44	TH	7	73	56
July.....	87	76	95	66	4.36	TH	16	65	64
October.....	83	73	91	52	7.88	0.0	15	62	63
Annual.....	81	70	95	27	47.20	TH	133	67	60

## MIAMI BEACH, FLORIDA

January.....	76	64	84	35	2.04	0.0	7	n.a.	n.a.
April.....	81	70	90	48	2.61	0.0	7	n.a.	n.a.
July.....	88	77	98	69	3.83	0.0	15	n.a.	n.a.
October.....	84	74	92	56	7.07	0.0	15	n.a.	n.a.
Annual.....	82	71	98	35	42.90	0.0	124	n.a.	n.a.

Month	Temperature				Precipitation			% possible sunshine	% relative humidity at noon
	Average maximum	Average minimum	Absolute maximum	Absolute minimum	Amount	Snowfall, inches	Days with precipitation		
NASHVILLE, TENNESSEE									
January.....	49	31	78	-10	4.93	2.6	12	42	66
April.....	71	49	90	25	3.69	0.1	11	60	51
July.....	91	69	107	51	3.96	0.0	10	69	53
October.....	74	50	94	26	2.52	T	7	65	51
Annual.....	71	50	107	-13	45.03	8.4	120	59	56
NEW ORLEANS, LOUISIANA									
January.....	64	48	83	15	4.78	0.1	10	49	67
April.....	78	62	91	38	5.45	TH	7	63	59
July.....	90	76	102	66	7.09	TH	15	58	64
October.....	80	65	94	40	3.66	TH	6	70	58
Annual.....	78	63	102	7	63.54	0.2	119	59	62
NEW YORK, NEW YORK (BATTERY PLACE)									
January.....	40	26	71	-6	3.46	7.5	12	51	61
April.....	58	42	91	12	3.22	1.0	11	60	54
July.....	82	67	102	54	4.24	TH	11	65	57
October.....	65	50	90	27	3.04	T	9	63	58
Annual.....	61	46	102	-14	42.03	30.1	125	60	59
PHOENIX, ARIZONA									
January.....	65	35	85	16	0.60	T	4	76	40
April.....	84	50	104	32	0.35	T	2	88	24
July.....	105	75	118	61	0.70	0.0	5	83	30
October.....	88	54	105	36	0.40	0.0	2	88	28
Annual.....	86	53	118	16	7.16	T	36	85	31
SALT LAKE CITY, UTAH									
January.....	36	17	60	-22	1.20	14.0	10	49	71
April.....	63	37	85	14	1.76	2.9	9	68	43
July.....	92	61	106	41	0.61	TH	5	82	28
October.....	67	39	87	18	1.34	0.2	6	73	42
Annual.....	64	39	106	-30	14.74	51.7	87	68	47
SAN FRANCISCO, CALIFORNIA (CITY OFFICE)									
January.....	55	45	78	29	4.03	T	11	53	69
April.....	62	49	89	40	1.49	TH	6	70	62
July.....	64	53	99	47	0.01	0.0	1	68	71
October.....	68	54	96	43	1.07	TH	4	70	60
Annual.....	63	51	101	27	20.51	0.2	69	66	66
SEATTLE, WASHINGTON									
January.....	45	36	67	3	4.49	5.0	18	25	81
April.....	59	44	87	30	1.94	0.0	13	50	64
July.....	75	56	100	46	0.52	0.0	5	64	63
October.....	61	48	82	29	3.08	T	13	35	80
Annual.....	60	46	100	3	37.92	11.2	152	46	72
WASHINGTON, D. C.									
January.....	44	29	80	-14	3.41	6.0	11	46	56
April.....	65	45	95	15	3.20	0.4	11	57	45
July.....	87	68	106	52	4.11	0.0	11	64	52
October.....	68	49	96	26	2.97	0.1	8	61	50
Annual.....	66	48	106	-15	41.44	19.5	124	58	51

## English Language Daily and Sunday U. S. Newspapers

(as of Sept. 30, 1955)

Source: Editor &amp; Publisher.

State	Morning papers & circulation		Evening papers & circulation		Total M & E & circulation		Sunday papers & circulation	
Alabama.....	3	185,236	14	417,073	17	602,309	13	526,994
Arizona.....	4	123,191	9	119,418	13	242,609	5	176,342
Arkansas.....	8	148,021	28	209,298	35	357,319	8	285,065
California.....	19	1,580,979	105	2,637,705	124	4,218,684	22	3,275,567
Colorado.....	3	188,145	22	385,011	25	573,156	9	611,504
Connecticut.....	6	192,912	19	528,674	25	721,586	6	451,935
Delaware.....	1	27,717	2	77,390	3	105,107	0	.....
District of Columbia.....	1	381,687	2	416,900	3	798,587	2	690,998
Florida.....	11	705,769	29	506,481	40	1,212,250	26	1,070,418
Georgia.....	5	345,867	24	492,712	29	838,579	10	768,240
Idaho.....	4	61,917	11	74,118	14	136,035	5	98,591
Illinois.....	9	1,499,331	77	2,367,539	85	3,866,870	18	3,220,064
Indiana.....	11	430,940	76	1,144,958	87	1,575,898	18	1,008,697
Iowa.....	4	302,751	40	624,310	44	927,061	8	809,080
Kansas.....	4	193,085	50	505,619	53	698,704	14	490,627
Kentucky.....	7	296,336	24	402,771	30	699,107	13	522,027
Louisiana.....	4	308,235	15	404,307	19	712,542	9	617,271
Maine.....	5	182,737	5	71,040	10	253,777	2	167,233
Maryland.....	4	220,027	8	519,217	12	739,244	3	668,696
Massachusetts.....	7	1,080,595	45	1,513,586	52	2,594,181	11	1,702,832
Michigan.....	2	493,684	52	1,818,449	54	2,312,133	12	2,009,525
Minnesota.....	4	352,017	26	648,165	30	1,000,182	5	896,808
Mississippi.....	5	66,724	16	198,708	21	265,432	10	173,907
Missouri.....	10	739,759	50	1,050,817	58	1,790,576	13	1,376,894
Montana.....	4	89,208	14	73,936	18	163,144	10	146,098
Nebraska.....	3	170,487	17	290,504	20	460,991	5	343,382
Nevada.....	2	26,649	6	46,524	8	73,173	3	55,591
New Hampshire.....	1	22,811	9	90,370	9	113,181	1	36,127
New Jersey.....	6	375,543	20	929,137	26	1,304,680	8	781,993
New Mexico.....	1	38,095	18	114,443	19	152,538	14	122,242
New York.....	24	4,806,728	70	3,698,178	94	8,504,906	18	9,279,462
North Carolina.....	8	488,609	37	493,321	45	981,930	15	650,069
North Dakota.....	2	32,158	9	116,830	11	148,988	2	82,648
Ohio.....	8	785,431	89	2,551,583	97	3,337,014	18	2,118,369
Oklahoma.....	9	303,569	44	411,067	53	714,636	40	660,402
Oregon.....	4	260,524	18	344,833	22	605,357	8	596,694
Pennsylvania.....	28	1,377,054	103	2,763,060	129	4,140,114	14	3,280,860
Rhode Island.....	1	53,259	6	238,459	7	291,718	2	189,418
South Carolina.....	8	307,548	10	137,363	18	444,911	7	332,348
South Dakota.....	1	2,000	11	157,172	12	159,172	4	109,876
Tennessee.....	8	483,013	22	522,714	30	1,005,727	12	821,784
Texas.....	23	1,135,289	89	1,603,472	112	2,738,761	76	2,367,570
Utah.....	1	94,606	4	134,084	5	228,690	4	224,821
Vermont.....	2	50,327	8	43,298	10	93,625	1	12,130
Virginia.....	10	370,615	22	412,744	32	783,359	12	544,488
Washington.....	6	314,655	21	595,752	27	910,407	10	830,702
West Virginia.....	9	237,878	21	261,552	30	499,430	9	393,216
Wisconsin.....	3	244,223	36	829,489	39	1,073,712	6	855,840
Wyoming.....	6	33,512	4	32,994	10	66,506	3	31,755
Total U. S., Sept. 30, 1955.....	316	22,183,408	1,454	33,963,951	1,760	56,147,359	541	46,447,658
Total U. S., Sept. 30, 1954.....	317	21,705,436	1,448	33,367,044	1,765	55,072,480	544	46,176,450
Total U. S., Sept. 30, 1953.....	327	21,412,474	1,458	33,059,812	1,785	54,472,286	544	45,948,554
Total U. S., Sept. 30, 1952.....	327	21,159,527	1,459	32,791,088	1,786	53,950,615	545	46,210,136
Total U. S., Sept. 30, 1951.....	319	21,222,525	1,454	32,795,913	1,773	54,017,938	543	46,279,358
Total U. S., Sept. 30, 1950.....	322	21,266,126	1,450	32,562,946	1,772	53,829,072	549	46,582,348
Total U. S., Sept. 30, 1949.....	329	21,004,650	1,451	31,840,901	1,780	52,845,551	546	46,398,968
Total U. S., Sept. 30, 1948.....	328	21,081,905	1,453	31,203,392	1,781	52,285,297	530	46,308,081
Total U. S., Sept. 30, 1947.....	328	20,762,317	1,441	30,910,959	1,769	51,673,276	511	45,151,319



# U. S. Daily Newspapers

Source: Audit Bureau of Circulations: Publishers' Statements for 6-mo. period ending Mar. 31, 1956.

(NOTE: Where two or more newspapers are listed under a city, the order is according to size of total daily circulation.)

City and newspaper	Net Paid Circulation		
	Morning <sup>1</sup>	Evening <sup>1</sup>	Sunday
Akron (Ohio): BEACON JOURNAL.....	.....	158,461	164,875
Albany (N. Y.): TIMES-UNION.....	60,085	.....	119,775
Atlanta: CONSTITUTION (M); JOURNAL (E); JOURNAL & CONSTITUTION (S)	190,192	259,143	506,205
Baltimore: SUN.....	187,914 <sup>2</sup>	213,891 <sup>2</sup>	322,240
NEWS-POST (E); AMERICAN (S).....	.....	232,897 <sup>2</sup>	328,516
Birmingham: POST-HERALD (M); NEWS (E & S).....	94,392	187,722	227,724
Boston: RECORD (M); AMERICAN (E); ADVERTISER (S).....	384,183 <sup>2</sup>	185,213 <sup>2</sup>	544,206
HERALD (M & S); TRAVELER (E).....	131,689 <sup>2</sup>	198,580 <sup>2</sup>	254,888
GLOBE.....	127,099 <sup>2</sup>	162,333 <sup>2</sup>	381,624
CHRISTIAN SCIENCE MONITOR.....	.....	172,836	.....
Buffalo: NEWS.....	.....	298,412	.....
COURIER-EXPRESS.....	162,185	.....	308,731
Charlotte (N. C.): OBSERVER.....	145,686	.....	159,974
Chattanooga: TIMES (M & S); NEWS-FREE PRESS (E).....	57,893	62,058	87,120
Chicago: TRIBUNE.....	935,732	.....	1,369,959
NEWS.....	.....	603,670 <sup>2</sup>	.....
SUN-TIMES.....	563,922 <sup>2,3</sup>	.....	644,034
AMERICAN.....	.....	524,823 <sup>2</sup>	706,407
WALL STREET JOURNAL (Midwest Edition).....	123,653 <sup>2</sup>	.....	.....
Cincinnati: ENQUIRER.....	210,398	.....	285,242
POST.....	.....	166,588	.....
TIMES-STAR.....	.....	155,261	.....
Cleveland: PRESS.....	.....	315,514	.....
PLAIN DEALER.....	303,313	.....	533,523
NEWS.....	.....	146,293	.....
Columbus (Ohio): DISPATCH.....	.....	174,072	242,217
Dallas: NEWS.....	212,708	.....	214,038
TIMES HERALD.....	.....	173,560	176,015
Dayton (Ohio): NEWS.....	.....	154,979	181,221
Denver: POST.....	.....	254,120 <sup>2</sup>	350,439
ROCKY MOUNTAIN NEWS.....	157,752	.....	161,455
Des Moines: REGISTER (M & S); TRIBUNE (E).....	226,735	138,009	525,147
Detroit: NEWS.....	.....	459,160	573,375
FREE PRESS.....	445,735	.....	500,121
TIMES.....	.....	405,245	522,688
Fort Wayne (Ind.): JOURNAL-GAZETTE (M & S); NEWS-SENTINEL (E).....	62,787	77,118	93,839
Fort Worth: STAR-TELEGRAM.....	116,381	134,810	229,415
Grand Rapids (Mich.): PRESS.....	.....	114,970	.....
Harrisburg (Pa.): PATRIOT (M); NEWS (E); PATRIOT-NEWS (S).....	39,344	82,554	126,971
Hartford (Conn.): TIMES.....	.....	116,709	.....
COURANT.....	97,224	.....	143,181
Honolulu: STAR-BULLETIN.....	.....	91,253 <sup>2</sup>	.....
ADVERTISER.....	46,026 <sup>2</sup>	.....	68,363
Houston: CHRONICLE.....	.....	204,054 <sup>2</sup>	228,604
POST.....	202,944	.....	215,883
PRESS.....	.....	120,015 <sup>2</sup>	.....
Indianapolis: STAR.....	208,258	.....	320,603
NEWS.....	.....	167,101	.....
Jacksonville (Fla.): TIMES-UNION.....	141,486	.....	152,216
Kansas City (Mo.): STAR (E & S); TIMES (M).....	342,395	349,132	367,375
Knoxville: NEWS-SENTINEL.....	.....	106,143	110,916
Little Rock: ARKANSAS GAZETTE.....	97,422	.....	107,954
Long Beach (Calif.): INDEPENDENT PRESS-TELEGRAM.....	47,208	103,540	140,673
Los Angeles: TIMES.....	440,394	.....	839,400
HERALD & EXPRESS.....	.....	350,270 <sup>2</sup>	.....
EXAMINER.....	344,663	.....	708,874
MIRROR-NEWS.....	.....	319,636 <sup>2</sup>	.....
Louisville: COURIER-JOURNAL (M & S); TIMES (E).....	215,847	176,653	313,633
Memphis: COMMERCIAL APPEAL (M & S); PRESS SCIMITAR (E).....	211,314	143,845	263,384
Miami: HERALD.....	269,781	.....	316,990

<sup>1</sup> Unless otherwise indicated, figure is an average of the Monday-through-Saturday circulation. <sup>2</sup> Figure is an average of the Monday-through-Friday circulation; i.e., Saturday circulation, if any, has not been used in making the average. <sup>3</sup> Published all day. <sup>4</sup> Post office address is Garden City, N. Y.

City and newspaper	Net Paid Circulation		
	Morning <sup>1</sup>	Evening <sup>1</sup>	Sunday
NEWS.....			
Milwaukee: JOURNAL.....		142,228	116,509
SENTINEL.....		350,805	489,779
Minneapolis: STAR (E); TRIBUNE (M & S).....	185,397		235,543
Nashville: TENNESSEAN.....	207,338	290,442	626,498
Nassau County (Long Island, N. Y.): NEWSDAY.....	115,624		198,629
New Orleans: TIMES-PICAYUNE (M); STATES (E); TIMES-PICAYUNE-STATES (S).....		254,552	
New York: NEWS.....	184,614	103,698 <sup>2</sup>	281,973
MIRROR.....	2,090,827 <sup>2</sup>		3,618,762
JOURNAL-AMERICAN.....	842,023 <sup>2</sup>		1,503,200
WORLD-TELEGRAM & SUN.....		680,910 <sup>2</sup>	878,083
TIMES.....		584,115 <sup>2</sup>	
POST.....	570,693		1,230,067
HERALD TRIBUNE.....		418,570 <sup>2</sup>	289,830
LONG ISLAND PRESS (Jamaica, N. Y.).....	374,417 <sup>2</sup>		596,308
WALL STREET JOURNAL (Eastern Edition).....		261,895	316,511
Newark (N. J.): NEWS.....	177,419 <sup>2</sup>		
STAR-LEDGER.....		282,619 <sup>2</sup>	320,135
Norfolk-Portsmouth-So. Norfolk: VIRGINIAN PILOT (M); NORFOLK LEDGER-DISPATCH & PORTSMOUTH STAR (E); VIRGINIAN PILOT & PORTSMOUTH STAR (S).....	214,843		325,659
Oakland (Calif.): TRIBUNE.....	103,364	91,668	138,298
Oklahoma City: OKLAHOMAN (M & S); TIMES (E).....		202,109	222,313
Omaha: WORLD-HERALD.....	156,573	112,633	252,303
Philadelphia: BULLETIN.....	131,625	122,022	264,886
INQUIRER.....		715,622 <sup>2</sup>	731,983
NEWS.....	615,803 <sup>2</sup>		1,157,087
Phoenix: REPUBLIC (M & S); GAZETTE (E).....		166,685 <sup>2</sup>	
Pittsburgh: PRESS.....	102,852	65,096	145,292
POST-GAZETTE.....		298,189	500,863
SUN-TELEGRAPH.....	269,645		
Portland (Maine): PRESS-HERALD (M); EXPRESS (E); TELEGRAM (S).....		180,241	418,873
Portland (Oreg.): OREGONIAN.....	48,977	30,469	92,609
OREGON JOURNAL.....	233,219		296,260
Providence (R. I.): JOURNAL (M & S); BULLETIN (E).....		181,910 <sup>2</sup>	201,476
Raleigh (N. C.): NEWS & OBSERVER (M & S); TIMES (E).....	53,553	148,236	185,618
Richmond (Va.): TIMES-DISPATCH (M & S); NEWS-LEADER (E).....	124,738	18,695	135,109
Rochester (N. Y.): DEMOCRAT & CHRONICLE (M & S); TIMES-UNION (E).....	130,261	102,617	181,854
Sacramento: BEE.....	122,293	125,269	179,771
St. Louis: POST-DISPATCH.....		142,934	
GLOBE-DEMOCRAT.....		402,439 <sup>2</sup>	480,084
St. Paul: DISPATCH (E); PIONEER PRESS (M & S).....	300,375 <sup>2</sup>		368,011
Salt Lake City: TRIBUNE (M & S); DESERET NEWS-SALT LAKE TELEGRAM (E).....	92,136	122,311	189,084
San Antonio: EXPRESS (M); NEWS (E); EXPRESS-NEWS (S).....	95,494	87,246	178,381
LIGHT.....	70,033 <sup>2</sup>	75,163 <sup>2</sup>	116,303
San Diego: EVENING TRIBUNE.....		105,810 <sup>2</sup>	135,124
UNION.....		108,136	
San Francisco: EXAMINER.....	74,900		161,817
CHRONICLE.....	241,108		510,325
CALL-BULLETIN.....	179,343		245,276
NEWS.....		137,340 <sup>2</sup>	
Seattle: TIMES.....		106,282 <sup>2</sup>	
POST-INTELLIGENCER.....		209,651 <sup>2</sup>	242,045
Shreveport (La.): TIMES (M & S); JOURNAL (E).....	188,211		263,944
South Bend-Mishawaka (Ind.): TRIBUNE.....	85,158	51,620	103,742
Spokane (Wash.): SPOKESMAN-REVIEW.....		110,014	113,287
Syracuse (N. Y.): HERALD-JOURNAL (E); HERALD-AMERICAN (S).....	90,990		145,408
Tampa (Fla.): TRIBUNE.....		135,802	221,244
Toledo: BLADE.....	128,812		144,818
Tulsa (Okla.): WORLD (M & S); TRIBUNE (E).....		194,870	180,674
Washington (D. C.): POST & TIMES HERALD.....	92,693	76,399	153,503
EVENING STAR; SUNDAY STAR.....	382,456 <sup>2</sup>		415,810
NEWS.....		255,454 <sup>2</sup>	287,023
Wichita (Kans.): EAGLE.....		171,153 <sup>2</sup>	
BEACON.....	95,499	70,616	113,529
Winston-Salem: JOURNAL (M); TWIN CITY SENTINEL (E); JOURNAL-SENTINEL (S).....		101,267	133,544
Worcester (Mass.): TELEGRAM (M & S); GAZETTE (E).....	56,517	35,773	70,006
Youngstown (Ohio): VINDICATOR & TELEGRAM.....	55,569	103,342	106,798
		98,693	141,078

## The Leading Magazines of the United States

Source: Audit Bureau of Circulations: Publishers' Statements for 6-month period ending Dec. 31, 1955.

Magazine	Circulation <sup>1</sup>	Magazine	Circulation
American Girl (M) .....	515,049	Motion Picture (M) .....	811,559
American Home (M) .....	3,114,941	National Geographic Magazine (M) .....	2,135,38
American Legion Magazine (M) ...	2,749,598	Nation's Business (M) .....	766,58
American Magazine (M) .....	2,683,289	Newsweek (W) .....	1,070,73
Argosy (M) .....	1,295,067	Our Sunday Visitor (W) .....	762,42
Better Homes & Gardens (M) ....	4,179,996	Outdoor Life (M) .....	919,
Boys' Life (M) .....	1,258,592	Parents' Magazine (M) .....	1,658,37
Charm (M) .....	660,146	Photoplay (M) .....	1,394,90
Collier's (BW) .....	3,776,538	Popular Mechanics Magazine (M) .....	1,332,60
Columbia (M) .....	854,893	Popular Science Monthly (M) ....	1,122,68
Confidential (BM) .....	3,674,423	Reader's Digest (M) .....	10,361,53
Coronet (M) .....	2,768,374	Redbook Magazine (M) .....	2,254,01
Cosmopolitan (M) .....	871,611	Saturday Evening Post (W) ....	4,764,87
Eagle Magazine (M) <sup>2</sup> .....	634,155	Science & Mechanics (BM) .....	513,19
Elks Magazine (M) .....	1,152,497	Scouting (M) <sup>4</sup> .....	954,13
Esquire (M) .....	762,908	Secrets (M) .....	610,42
Everywoman's (M) .....	1,714,949 <sup>5</sup>	See (BM) .....	537,99
Family Circle (M) .....	4,060,469	Seventeen (M) .....	957,32
Field & Stream (M) .....	891,131	Sports Afield (M) .....	878,69
Glamour (M) .....	600,296	Sports Illustrated (W) .....	608,68
Good Housekeeping (M) .....	3,621,288	Sunset (M) .....	565,17
Grit (W) .....	793,596	Time (W) .....	1,951,03
Holiday (M) .....	843,311	Town Journal (M) .....	1,876,27
House & Garden (M) .....	535,581	True (M) .....	1,814,67
House Beautiful (M) .....	664,044	True Confessions (M) .....	1,450,21
Household (M) .....	2,473,811	True Romance (M) .....	707,17
Junior Scholastic (W) <sup>3</sup> .....	991,971	True Story (M) .....	2,671,11
Ladies' Home Journal (M) .....	4,969,930	TV Guide (all editions) (W) .....	3,200,00
Life (W) .....	5,552,276	TV Radio Mirror (M) .....	657,87
Living for Young Homemakers (M) ..	596,800	U.S. News & World Report (W) ..	754,29
Look (BW) .....	4,061,572	V.F.W. Magazine (M) .....	1,061,71
Mademoiselle (M) .....	514,597	Woman's Day (M) .....	3,410,34
McCall's Magazine (M) .....	4,641,018	Woman's Home Companion (M) .	4,118,25
Mechanix Illustrated (M) .....	955,736	Workbasket (M) .....	1,529,85
Modern Romances (M) .....	1,074,445	Young Catholic Messenger (W) <sup>3</sup> ..	665,82
Modern Screen (M) .....	1,316,859		

<sup>1</sup> Average net paid circulation. <sup>2</sup> Bimonthly August and September. <sup>3</sup> Weekly during school year, except holiday periods. <sup>4</sup> Except that May and June, and July and August issues are combined. <sup>5</sup> For period ending June 30, 1955.

NOTE: W—weekly; M—monthly; BW—biweekly; BM—bimonthly.

## Radio and Television Stations and Networks

Source: National Association of Radio and Television Broadcasters.

Major networks	Standard broadcast stations (Jan. 1, 1956)		TV Stations (May 1, 1956)	
	Owned and operated	Affiliated	Owned and operated	
ABC—American Broadcasting Company .....	5	334	5	
CBS—Columbia Broadcasting System .....	6	212	4	
DM—Du Mont Television Network .....	..	..	2	
MBS—Mutual Broadcasting System .....	..	557	..	
NBC—National Broadcasting Company .....	5	207	6	

Number of stations* (Jan. 1, 1956)	Operating	Permits for construction	Total
Standard broadcast .....	2,824	111	2,935
FM (Frequency modulation) .....	540†	17	557
Television .....	482‡	108	590

\* Including territories and possessions. † Includes 19 CP's operating on special temporary authority. ‡ Includes 147 licensed and 335 CP's operating on special temporary authority.



## Patents

Source: Patent Office.

A patent, in the most general sense, is a document issued by a government, conferring some special right or privilege. The term is now restricted mainly to patents for inventions; occasionally, land patents.

The grant of a patent for an invention gives the inventor the privilege, for a limited period of time, of excluding others from practicing a certain art or from making, using, or selling a certain article. However, it does not give him the right to make, use, or sell his own invention if it is an improvement on some unexpired patent whose claims are infringed thereby.

In the U. S., the law provides that a patent may be granted, for a term of 17 years, to any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, as well as any new and useful improvements thereof. A patent may also be granted to a person who has invented or discovered and asexually reproduced a new and distinct variety of plant (other than a tuber-propagated one) or has invented a new, original and ornamental design for an article of manufacture.

A patent is granted only upon a regularly

filed application, complete in all respects; upon payment of the fees; and upon determination that the disclosure is complete and that the invention is new and useful. The disclosure must be of such nature as to enable others to reproduce the invention.

A complete application, which must be addressed to the Commissioner of Patents, Washington, D. C., consists of a petition, specification and claims, oath, drawing (whenever the nature of the case admits of it) and a filing fee of \$30 for cases having 20 claims or less. An additional fee of \$1 per claim is required for cases having more than 20 claims. The filing fee is not returned to the applicant if the patent is refused. If the patent is allowed, another fee of \$30 (and \$1 each for claims allowed in excess of 20) is required before the patent is issued. The fees for design patents vary.

Applications are considered in the order in which they are received. Patents are not granted for printed matter, for methods of doing business or for devices for which claims contrary to natural laws are made. Applications for a perpetual-motion machine have been made from time to time, but until a working model is presented that actually fulfills the claim, no patent will be issued.

## Trademarks

Source: Patent Office.

A trademark may be defined as a word, letter, device or symbol, as well as some combination of these, which is used in connection with merchandise and which points distinctly to the origin or ownership of it.

Certificates of registration of trademarks are issued under the seal of the Patent Office and may be registered by the owner if he is engaged in interstate or foreign commerce, since any Federal jurisdiction over trademarks arises under the commerce clause of the Constitution. Trademarks may be registered by foreign owners who comply with our law, as well as by citizens of foreign countries with which the U. S. has treaties relating to trademarks. American citizens may register trademarks in foreign

countries by complying with the laws of those countries. The right to registration and protection of trademarks in many foreign countries is guaranteed by treaties.

General jurisdiction in trademark cases is given to the Federal courts. Decisions of examiners on applications or oppositions are subject to appeal to the Commissioner of Patents and from him to the U. S. Court of Customs and Patent Appeals. Before adopting a trademark, a person should make a search of prior marks in order to avoid infringing unwittingly upon them.

The duration of a trademark registration is 20 years, but it may be renewed indefinitely for 20-year periods, provided the trademark is still in use at the time of expiration.

## Television Statistics

Source: MART Magazine; TECHNICIAN Magazine, Caldwell-Clements, Inc.

Year	TV sets mfd.	Retail value	Picture tubes mfd.	Retail value	TV stations	Homes with TV*	TV sets in use in U. S.
1946.....	10,000	\$ 5,000,000	20,000	\$ 1,000,000	5	8,000	8,000
1947.....	250,000	100,000,000	300,000	15,000,000	20	250,000	250,000
1948.....	1,000,000	350,000,000	1,500,000	75,000,000	44	1,000,000	1,000,000
1949.....	3,000,000	950,000,000	3,500,000	210,000,000	100	4,000,000	4,000,000
1950.....	7,500,000	2,700,000,000	8,000,000	400,000,000	107	10,400,000	10,500,000
1951.....	5,600,000	2,100,000,000	6,000,000	300,000,000	108	15,500,000	15,750,000
1952.....	6,300,000	2,360,000,000	6,500,000	260,000,000	123	21,000,000	22,210,000
1953.....	7,300,000	1,675,000,000	9,000,000	360,000,000	350	26,000,000	28,000,000
1954.....	7,100,000	1,278,000,000	10,300,000	360,500,000	415	30,000,000	33,000,000
1955.....	7,800,000	1,350,000,000	11,100,000	400,000,000	460	34,000,000	39,400,000

\* Includes dwellings such as apartment hotels.

## Copyrights

Source: Copyright Office.

A copyright is a statutory right obtained by authors, musicians and artists or their assigns, upon compliance with the provisions of the copyright law, to prevent the reproduction of their works without their consent. The U. S. Constitution (Article I, Section 8) empowers Congress "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." The copyright owner possesses the exclusive right to print, reprint, publish, copy and vend the copyrighted work. Among some of the other rights possessed by the copyright owner are the exclusive rights to translate and dramatize literary works, to control public performance of dramas, and, in the case of nondramatic literary works and musical compositions, to control public performance for profit. Special provisions in regard to mechanical reproductions of musical compositions are included. Copyright protection extends to books; pamphlets; periodicals and contributions to periodicals; lectures, sermons, and monologues; dramas and dramatical musical compositions; musical compositions; maps; works of art or models and designs for works of art; reproductions of a work of art; drawings or plastic works of scientific or technical character; photographs, prints, and pictorial illustrations; commercial prints and labels; and motion pictures.

Copyright term endures 28 years from date of registration in the Copyright Office for unpublished material and from the date of publication for published works. The copyright may be renewed for an additional period of 28 years, provided application for such renewal is made within one year prior to the date of expiration of the original term. The copyright of a book or similar publication is secured by publication of such work after printing on the title page, or the page immediately following, the required copyright notice. This notice consists of the word *Copyright* or the abbreviation *Copr.*, the year of publication, and the name of the copyright owner. It is important to bear in mind that copyright comes into being at the time of first publication if this required notice appears on the work. If publication occurs without this notice, the work falls into the public domain, and the Copyright

Office cannot register the claim. In short, the Copyright Office does not grant copyrights; the obtaining of such protection depends on whether or not the claimant follows the statutory formalities at the time of publication. In view of the fact that those formalities vary with the different classes of works subject to copyright, persons interested in securing copyright should obtain circular No. 35 from the Register of Copyrights, Library of Congress, Washington 25.

The law requires that, promptly after the work has been published, two copies thereof (foreign works, one copy) must be promptly deposited in the Copyright Office. These copies should be accompanied by the proper application form and the statutory fee of \$4. If the work is a commercial print or label used with the sale or advertisement of an article of merchandise, the fee is \$6.

Effective June 3, 1949, the term of ad interim protection for books and periodicals in the English language first published abroad was extended to five years. Such works may be imported into the U. S. up to a total of 1,500 copies after ad interim registration has been obtained. The above amendment to the law also affords to the foreign author or publishers an option of obtaining registration without payment of the usual statutory fee if an extra copy of the work, accompanied by a catalogue card, is submitted to the Copyright Office within six months of first publication abroad.

The Act of Aug. 31, 1954, modified a number of existing formalities, primarily with regard to certain foreign works, and was designed to implement the Universal Copyright Convention, which was ratified by the Senate on June 25, 1954, and took effect on Sept. 16, 1955. One principal modification is that U. S. authors and publishers may use the symbol © instead of the word *Copyright* or the abbreviation *Copr.* The symbol must be accompanied by the year date of first publication and the name of the copyright claimant. The use of this form may obtain automatic copyright protection in member countries of the Universal Copyright Convention.

Application forms, etc., may be obtained free from the Copyright Office. Bulletin 14, the U. S. copyright law, can be purchased from the Register of Copyrights for 25¢.

## Radio and Phonograph Statistics for U. S.

Source: MART Magazine, TECHNICIAN Magazine, Caldwell-Clements, Inc.

Type	Number*	Type	Number*
Radios: Homes with.....	50,500,000	Turntables: 78 rpm only.....	13,000,000
Secondary sets in homes.....	42,000,000	33 rpm only.....	150,000
Sets in business, etc.....	8,500,000	45 rpm only.....	2,000,000
Automobile radios.....	34,000,000	78 and 33 rpm.....	90,000
Total radios.....	135,000,000	3-speed.....	16,000,000
Amateur stations.....	120,000	Total turntables.....	31,240,000

\* In operation as of Jan. 1, 1956. † Includes dwellings such as apartment hotels. NOTE: Radio sets in rest of world: North America (except U.S.), 13,000,000; South America, 14,000,000; Europe, 80,000,000; Asia, 19,000,000; Australia, 7,500,000; Africa, 4,200,000. Total sets in world (including U.S.): 272,700,000.

## Motor Vehicle Laws as of 1956

Source: American Automobile Association.

State	Speed limit <sup>1</sup>	Date new license plates can be used	Driving license Required	Minimum age	Gasoline tax	Per cent sales tax	Period of stay <sup>2</sup>	Safety responsibility law	Certificate of title required
Alabama.....	60 pf AF	Oct. 1	yes	16	\$.07	3	Reciprocal	yes	no
Arizona.....	AK	Dec. 1	yes	18	.05	2	( <sup>4</sup> )	yes	yes
Arkansas.....	60 pf AK	Jan. 1	yes	16	.065	2	30 days	yes	yes
California.....	55 pf A	Jan. 1	yes	16	.06	3	( <sup>12</sup> )	yes	yes
Colorado.....	60 pf A	Jan. 1	yes	16	.06	2	Reciprocal	yes	yes
Connecticut.....	45 pf AJK	Mar. 1	yes	16	.06	3½ <sup>8</sup>	6 months	yes	no
Delaware.....	50 C	( <sup>1</sup> )	yes	16	.05	...	Reciprocal	yes	yes
D. C.....	25 K	Mar. 1	yes	16	.06	2 <sup>9</sup>	Reciprocal	yes	yes
Florida.....	60 pf D	Jan. 1	yes	16	.07	...	Reciprocal	yes	yes
Georgia.....	60 F	Jan. 1	yes	16	.065	3	30 days	yes	no
Idaho.....	60 pf AI	Dec. 1	yes	16	.06	...	Reciprocal	yes	yes
Illinois.....	AK	Dec. 1	yes	16	.05	2½	Reciprocal	yes	yes
Indiana.....	65 pf AK <sup>10</sup>	Jan. 3	yes	16	.04	...	60 days	yes	yes
Iowa.....	A	Dec. 1	yes	16	.06	2	Reciprocal	yes	yes
Kansas.....	A	Jan. 1	yes	16	.05	2	( <sup>12</sup> )	yes	yes
Kentucky.....	60 F	Dec. 29	yes	16	.07	3 <sup>3</sup>	Reciprocal	yes	( <sup>8</sup> )
Louisiana.....	60 pf A	Dec. 1	yes	15	.07	2	Reciprocal	yes	yes
Maine.....	45 pf A	Dec. 25	yes	15	.07	2	Reciprocal	yes	no
Maryland.....	50 pf AE	Mar. 1	yes	16	.06	2	90 days	yes	yes
Massachusetts.....	40 pf A	Jan. 1	yes	16	.05	( <sup>9</sup> )	Reciprocal <sup>10</sup>	( <sup>11</sup> )	no
Michigan.....	65 I	Dec. 1	yes	16	.06	3	90 days	yes	yes
Minnesota.....	60 pf D	Nov. 1	yes	15	.05	...	Reciprocal	yes	no
Mississippi.....	60	Nov. 1	yes	15	.07	3	( <sup>12</sup> )	yes	yes
Missouri.....	AK	On issue	yes	16	.03	2	Reciprocal	yes	yes
Montana.....	AIK <sup>6</sup>	Jan. 1	yes	15	.07	...	30 days <sup>12,14</sup>	yes	yes
Nebraska.....	60 FK	Jan. 1	yes	15½	.06	...	( <sup>15</sup> )	yes	yes
Nevada.....	A	Jun. 1	yes	16	.06	...	No limit	yes	yes
New Hampshire.....	50 pf AK	Mar. 1	yes	16	.05	...	Reciprocal	yes	no
New Jersey.....	50 K	Mar. 1	yes	17	.04	...	Reciprocal	yes <sup>19</sup>	yes
New Mexico.....	60 pf I	Dec. 15	yes	15	.06	2	( <sup>20</sup> )	yes	yes
New York.....	50 K <sup>21</sup>	Jan. 1	yes	18	.04	...	Reciprocal	( <sup>22</sup> )	no
North Carolina.....	55	Jan. 1	yes	16	.07	3½	Reciprocal	yes	yes
North Dakota.....	65 I	Nov. 1	yes	16	.06	2	Reciprocal	yes	yes
Ohio.....	50 pf	Mar. 1	yes	16	.05	3	Reciprocal	yes	yes
Oklahoma.....	65 I	Dec. 12	yes	16	.065	2	60 days <sup>17</sup>	yes	yes
Oregon.....	55 pf A	On issue	yes	16	.06	...	Reciprocal	yes	yes
Pennsylvania.....	50	Mar. 15	yes	16	.06	3	Reciprocal	yes	yes
Rhode Island.....	50 pf H	Mar. 1	yes	16	.04	2	Reciprocal	yes	no
South Carolina.....	55 pf	On issue	yes	14	.07	3	90 days	yes	no
South Dakota.....	60 pf AF	Jan. 1	yes	15	.05	2 <sup>4</sup>	60 days	yes	yes
Tennessee.....	65 I	Mar. 1	yes	16	.07	2	30 days	yes	yes
Texas.....	60 pf AI	Feb. 1	yes	16	.05	1.1	Reciprocal	yes	yes
Utah.....	60 pf F	Dec. 15	yes	16	.05	2	Reciprocal	yes	yes
Vermont.....	50 <sup>23</sup>	Mar. 1	yes	16	.055	...	Reciprocal	yes	no
Virginia.....	55 <sup>24</sup>	Mar. 15	yes	15	.06	...	6 months	yes	yes
Washington.....	60 K	Jan. 1	yes	16	.065	3	Reciprocal	yes	yes
West Virginia.....	55	June 1	yes	16	.06	2	Rec. 3 mo.	yes	yes
Wisconsin.....	65 I	On issue	yes	16	.06	...	Reciprocal	yes	yes
Wyoming.....	60 pf	Dec. 1	yes	15	.05	2	90 days	yes	yes

<sup>1</sup> A—reasonable and proper; B—lower speed at night and on old highways; C—55 mph on 4-lane highways; D—50 mph pf at night; E—55 mph on dual-lane highways; F—50 mph at night; G—60 mph where marked; H—45 mph at night; I—55 mph at night; J—parkways to 55 mph where marked; K—unless otherwise marked; pf—prima facie limit. <sup>2</sup> Applies to nonresidents. The term "reciprocal" means that the state will extend to a nonresident the identical privileges granted by his home state to nonresident motorists. In some states, visitors must register within a specified time. In most states, persons who intend to reside permanently must buy new plates and secure new driving license at once, or within a limited time. Acquisition of employment or placing children in public school is often considered intention to reside permanently. <sup>3</sup> Registry tax on first registration in state. <sup>4</sup> Visitor's permit required after 10 days. <sup>5</sup> Daytime; 55 mph at night. <sup>6</sup> Use tax on new cars, first registration of used cars. <sup>7</sup> Three months before current registration expires. <sup>8</sup> Bill of sale must be filed. <sup>9</sup> Excise tax. <sup>10</sup> Public liability insurance required after 30 days. <sup>11</sup> State has compulsory insurance. <sup>12</sup> Visitors must register immediately. <sup>13</sup> Until home-state license plates expire. <sup>14</sup> Extension granted. <sup>15</sup> Nebraska operator's license required in 30 days. <sup>16</sup> \$15 maximum. <sup>17</sup> Visitors must register within 15 days. <sup>18</sup> For automobiles; busses 55 mph; large trucks 45. <sup>19</sup> State has "Unsatisfied Judgment Fund" law. <sup>20</sup> As of July 1, 1953, nonresident car must bear valid registration plates of place of residence of owner. <sup>21</sup> 1953 law makes it traffic offense to drive unreasonably slow. <sup>22</sup> Unless otherwise posted; trucks and busses 45 mph. <sup>23</sup> Passenger vehicles; trucks 45 mph.



## Road Mileages Between U. S. Cities

Copyright, General Drafting Co., Inc.

Cities	Birming- ham	Boston	Buffalo	Chicago	Cleveland	Dallas	Denver
Birmingham, Ala. ....	.....	1,205	930	680	740	655	1,315
Boston, Mass. ....	1,205	.....	460	990	650	1,850	2,000
Buffalo, N. Y. ....	930	460	.....	530	190	1,400	1,550
Chicago, Ill. ....	680	990	530	.....	340	960	1,020
Cleveland, Ohio ....	740	650	190	340	.....	1,210	1,360
Dallas, Tex. ....	655	1,850	1,400	960	1,210	.....	780
Denver, Colo. ....	1,315	2,000	1,550	1,020	1,360	780	.....
Detroit, Mich. ....	755	720	260	280	170	1,190	1,315
El Paso, Tex. ....	1,290	2,415	1,970	1,530	1,780	615	700
Houston, Tex. ....	675	1,895	1,505	1,100	1,330	245	1,035
Indianapolis, Ind. ....	510	930	500	190	305	910	1,070
Kansas City, Mo. ....	715	1,415	985	510	790	510	260
Los Angeles, Calif. ....	2,085	3,085	2,640	2,120	2,415	1,425	1,170
Louisville, Ky. ....	395	970	540	305	350	865	1,145
Memphis, Tenn. ....	255	1,355	925	545	730	480	1,085
Miami, Fla. ....	780	1,565	1,485	1,400	1,335	1,370	2,135
Minneapolis, Minn. ....	1,065	1,230	770	440	765	995	845
New Orleans, La. ....	360	1,570	1,290	945	1,075	510	1,290
New York, N. Y. ....	985	215	395	845	500	1,625	1,795
Omaha, Nebr. ....	925	1,460	1,015	480	825	665	540
Philadelphia, Pa. ....	895	300	380	770	430	1,545	1,715
Phoenix, Ariz. ....	1,710	2,700	2,255	1,785	2,110	1,040	840
Pittsburgh, Pa. ....	765	590	225	470	125	1,260	1,430
St. Louis, Mo. ....	495	1,160	730	295	535	665	875
Salt Lake City, Utah ....	1,820	2,425	1,975	1,410	1,785	1,265	515
San Francisco, Calif. ....	2,425	3,190	2,740	2,195	2,550	1,785	1,270
Seattle, Wash. ....	2,705	2,950	2,480	2,120	2,485	2,185	1,385
Washington, D. C. ....	755	435	380	705	365	1,400	1,645

Cities	Detroit	El Paso	Houston	Indian- apolis	Kansas City	Los Angeles	Louisville
Birmingham, Ala. ....	755	1,290	675	510	715	2,085	395
Boston, Mass. ....	720	2,415	1,895	930	1,415	3,085	970
Buffalo, N. Y. ....	260	1,970	1,505	500	985	2,640	540
Chicago, Ill. ....	280	1,530	1,100	190	510	2,120	305
Cleveland, Ohio ....	170	1,780	1,330	305	790	2,415	350
Dallas, Tex. ....	1,190	615	245	910	510	1,425	865
Denver, Colo. ....	1,315	700	1,035	1,070	620	1,170	1,145
Detroit, Mich. ....	.....	1,755	1,300	275	740	2,400	360
El Paso, Tex. ....	1,755	.....	760	1,480	1,010	805	1,495
Houston, Tex. ....	1,300	760	.....	1,020	765	1,545	980
Indianapolis, Ind. ....	275	1,480	1,020	.....	485	2,150	115
Kansas City, Mo. ....	740	1,010	765	485	.....	1,610	520
Los Angeles, Calif. ....	2,400	805	1,545	2,145	1,610	.....	2,175
Louisville, Ky. ....	360	1,495	980	115	520	2,175	.....
Memphis, Tenn. ....	715	1,105	575	450	475	1,835	380
Miami, Fla. ....	1,380	2,005	1,220	1,530	2,820	1,080	1,030
Minneapolis, Minn. ....	525	1,420	1,255	615	475	2,010	730
New Orleans, La. ....	1,115	1,115	365	840	875	1,920	740
New York, N. Y. ....	650	2,205	1,655	720	1,205	2,875	755
Omaha, Nebr. ....	745	1,095	910	590	210	1,690	705
Philadelphia, Pa. ....	575	2,125	1,565	645	1,130	2,795	680
Phoenix, Ariz. ....	2,040	420	1,160	1,770	1,280	385	1,795
Pittsburgh, Pa. ....	285	1,840	1,375	360	840	2,510	395
St. Louis, Mo. ....	515	1,230	805	230	250	1,895	270
Salt Lake City, Utah ....	1,710	875	1,450	1,560	1,135	740	1,660
San Francisco, Calif. ....	2,475	1,210	1,950	2,325	1,890	405	2,430
Seattle, Wash. ....	2,230	1,795	2,365	2,325	1,925	1,180	2,465
Washington, D. C. ....	525	2,045	1,430	565	1,050	2,725	600

## Road Mileages Between U. S. Cities

Copyright, General Drafting Co., Inc.

Cities	Memphis	Miami	Minneapolis	New Orleans	New York	Omaha	Philadelphia
Birmingham, Ala. ....	255	780	1,065	360	985	925	895
Boston, Mass. ....	1,355	1,565	1,230	1,570	215	1,460	300
Buffalo, N. Y. ....	925	1,485	770	1,290	395	1,015	380
Chicago, Ill. ....	545	1,400	440	945	845	480	770
Cleveland, Ohio ....	730	1,335	765	1,075	500	825	430
Dallas, Tex. ....	480	1,370	995	510	1,625	665	1,545
Denver, Colo. ....	1,085	2,135	845	1,290	1,795	540	1,715
Detroit, Mich. ....	715	1,380	525	1,115	650	745	575
El Paso, Tex. ....	1,105	2,005	1,420	1,115	2,205	1,095	2,125
Houston, Tex. ....	575	1,220	1,255	365	1,655	910	1,565
Indianapolis, Ind. ....	450	1,220	615	840	720	590	645
Kansas City, Mo. ....	475	1,530	475	875	1,205	210	1,130
Los Angeles, Calif. ....	1,835	2,820	2,010	1,920	2,875	1,690	2,795
Louisville, Ky. ....	380	1,080	730	740	755	705	680
Memphis, Tenn. ....	....	1,030	865	400	1,130	685	1,040
Miami, Fla. ....	1,030	....	1,820	885	1,340	1,735	1,250
Minneapolis, Minn. ....	865	1,820	....	1,265	1,270	355	1,195
New Orleans, La. ....	400	885	1,265	....	1,340	1,085	1,250
New York, N. Y. ....	1,130	1,340	1,270	1,340	....	1,290	90
Omaha, Nebr. ....	685	1,735	355	1,085	1,290	....	1,210
Philadelphia, Pa. ....	1,040	1,250	1,195	1,250	90	1,210	....
Phoenix, Ariz. ....	1,500	2,410	1,680	1,535	2,500	1,355	2,410
Pittsburgh, Pa. ....	775	1,240	895	1,125	370	915	300
St. Louis, Mo. ....	305	1,265	560	710	960	460	880
Salt Lake City, Utah ....	1,600	2,615	1,285	1,775	2,255	950	2,175
San Francisco, Calif. ....	2,175	3,160	2,040	2,295	3,020	1,715	2,940
Seattle, Wash. ....	2,400	3,425	1,680	2,695	2,985	1,680	2,905
Washington, D. C. ....	905	1,115	1,130	1,115	230	1,145	140

Cities	Phoenix	Pittsburgh	St. Louis	Salt Lake City	San Francisco	Seattle	Washington
Birmingham, Ala. ....	1,710	765	495	1,820	2,425	2,705	755
Boston, Mass. ....	2,700	590	1,160	2,425	3,190	2,950	435
Buffalo, N. Y. ....	2,255	225	730	1,975	2,740	2,480	380
Chicago, Ill. ....	1,785	470	295	1,410	2,195	2,120	705
Cleveland, Ohio ....	2,110	125	535	1,785	2,550	2,485	365
Dallas, Tex. ....	1,040	1,260	665	1,265	1,785	2,185	1,400
Denver, Colo. ....	840	1,430	875	515	1,270	1,385	1,645
Detroit, Mich. ....	2,040	285	515	1,710	2,475	2,230	525
El Paso, Tex. ....	420	1,840	1,230	875	1,210	1,795	2,045
Houston, Tex. ....	1,160	1,375	805	1,450	1,950	2,365	1,430
Indianapolis, Ind. ....	1,770	360	230	1,560	2,325	2,325	565
Kansas City, Mo. ....	1,280	840	250	1,135	1,890	1,925	1,050
Los Angeles, Calif. ....	385	2,510	1,895	740	405	1,180	2,725
Louisville, Ky. ....	1,795	395	270	1,660	2,430	2,465	600
Memphis, Tenn. ....	1,500	775	305	1,600	2,175	2,400	905
Miami, Fla. ....	2,410	1,240	1,265	2,615	3,160	3,425	1,115
Minneapolis, Minn. ....	1,680	895	560	1,285	2,040	1,680	1,130
New Orleans, La. ....	1,535	1,125	710	1,775	2,295	2,695	1,115
New York, N. Y. ....	2,500	370	960	2,255	3,020	2,985	230
Omaha, Nebr. ....	1,355	915	460	950	1,715	1,680	1,145
Philadelphia, Pa. ....	2,410	300	880	2,175	2,940	2,905	140
Phoenix, Ariz. ....	....	2,125	1,535	725	790	1,595	2,340
Pittsburgh, Pa. ....	2,125	....	585	1,880	2,645	2,610	235
St. Louis, Mo. ....	1,535	585	....	1,385	2,140	2,175	805
Salt Lake City, Utah ....	725	1,880	1,385	....	755	895	2,110
San Francisco, Calif. ....	790	2,645	2,140	755	....	890	2,875
Seattle, Wash. ....	1,595	2,610	2,175	895	890	....	2,845
Washington, D. C. ....	2,340	235	805	2,110	2,875	2,845	....

## Air Distances Between U. S. Cities

Source: U. S. Coast and Geodetic Survey.

Cities	Birming- ham	Boston	Buffalo	Chicago	Cleveland	Dallas	Denver
Birmingham, Ala. ....	.....	1,052	776	578	618	581	1,095
Boston, Mass. ....	1,052	.....	400	851	551	1,551	1,769
Buffalo, N. Y. ....	776	400	.....	454	173	1,198	1,370
Chicago, Ill. ....	578	851	454	.....	308	803	920
Cleveland, Ohio ....	618	551	173	308	.....	1,025	1,227
Dallas, Tex. ....	581	1,551	1,198	803	1,025	.....	663
Denver, Colo. ....	1,095	1,769	1,370	920	1,227	663	.....
Detroit, Mich. ....	641	613	216	238	90	999	1,156
El Paso, Tex. ....	1,152	2,072	1,692	1,252	1,525	572	557
Houston, Tex. ....	567	1,605	1,286	960	1,114	225	879
Indianapolis, Ind. ....	433	807	435	165	263	763	1,000
Kansas City, Mo. ....	579	1,251	861	414	700	451	558
Los Angeles, Calif. ....	1,802	2,596	2,198	1,745	2,049	1,240	831
Louisville, Ky. ....	331	826	483	269	311	726	1,038
Memphis, Tenn. ....	217	1,137	803	482	630	420	879
Miami, Fla. ....	665	1,255	1,181	1,188	1,087	1,111	1,726
Minneapolis, Minn. ....	862	1,123	731	355	630	862	700
New Orleans, La. ....	312	1,359	1,086	833	924	443	1,082
New York, N. Y. ....	864	188	292	713	405	1,374	1,631
Omaha, Nebr. ....	732	1,282	883	432	730	586	488
Philadelphia, Pa. ....	783	271	279	666	360	1,299	1,579
Phoenix, Ariz. ....	1,456	2,300	1,906	1,453	1,749	887	586
Pittsburgh, Pa. ....	608	483	178	410	115	1,070	1,320
St. Louis, Mo. ....	400	1,038	662	262	492	547	796
Salt Lake City, Utah ....	1,466	2,099	1,699	1,260	1,568	999	371
San Francisco, Calif. ....	2,013	2,699	2,300	1,858	2,166	1,483	949
Seattle, Wash. ....	2,082	2,493	2,117	1,737	2,026	1,681	1,021
Washington, D. C. ....	661	393	292	597	306	1,185	1,494

Cities	Detroit	El Paso	Houston	Indian- apolis	Kansas City	Los Angeles	Louisville
Birmingham, Ala. ....	641	1,152	567	433	579	1,802	331
Boston, Mass. ....	613	2,072	1,605	807	1,251	2,596	826
Buffalo, N. Y. ....	216	1,692	1,286	435	861	2,198	483
Chicago, Ill. ....	238	1,252	960	165	414	1,745	269
Cleveland, Ohio ....	90	1,525	1,114	263	700	2,049	311
Dallas, Tex. ....	999	572	225	763	451	1,240	726
Denver, Colo. ....	1,156	557	879	1,000	558	831	1,038
Detroit, Mich. ....	.....	1,479	1,105	240	645	1,983	316
El Paso, Tex. ....	1,479	.....	676	1,264	839	701	1,254
Houston, Tex. ....	1,105	676	.....	865	644	1,374	803
Indianapolis, Ind. ....	240	1,264	865	.....	453	1,809	107
Kansas City, Mo. ....	645	839	644	453	.....	1,356	480
Los Angeles, Calif. ....	1,983	701	1,374	1,809	1,356	.....	1,829
Louisville, Ky. ....	316	1,254	803	107	480	1,829	.....
Memphis, Tenn. ....	623	976	484	384	369	1,603	320
Miami, Fla. ....	1,152	1,643	968	1,024	1,241	2,339	919
Minneapolis, Minn. ....	543	1,157	1,056	511	413	1,524	605
New Orleans, La. ....	939	983	318	712	680	1,673	623
New York, N. Y. ....	482	1,905	1,420	646	1,097	2,481	652
Omaha, Nebr. ....	669	878	794	525	166	1,315	580
Philadelphia, Pa. ....	443	1,836	1,341	585	1,038	2,394	582
Phoenix, Ariz. ....	1,690	346	1,017	1,499	1,049	357	1,508
Pittsburgh, Pa. ....	205	1,590	1,137	330	781	2,136	344
St. Louis, Mo. ....	455	1,034	679	231	238	1,589	242
Salt Lake City, Utah ....	1,492	689	1,200	1,356	925	579	1,402
San Francisco, Calif. ....	2,091	995	1,645	1,949	1,506	347	1,986
Seattle, Wash. ....	1,938	1,376	1,891	1,872	1,506	959	1,943
Washington, D. C. ....	396	1,728	1,220	494	945	2,300	476



## Air Distances Between U. S. Cities

Source: U. S. Coast and Geodetic Survey.

Cities	Memphis	Miami	Minneapolis	New Orleans	New York	Omaha	Philadelphia
Birmingham, Ala. ....	217	665	862	312	864	732	783
Boston, Mass. ....	1,137	1,255	1,123	1,359	188	1,282	271
Buffalo, N. Y. ....	803	1,181	731	1,086	292	883	279
Chicago, Ill. ....	482	1,188	355	833	713	432	666
Cleveland, Ohio ....	630	1,087	630	924	405	739	360
Dallas, Tex. ....	420	1,111	862	443	1,374	586	1,299
Denver, Colo. ....	879	1,726	700	1,082	1,631	488	1,579
Detroit, Mich. ....	623	1,152	543	939	482	669	443
El Paso, Tex. ....	976	1,643	1,157	983	1,905	878	1,836
Houston, Tex. ....	484	968	1,056	318	1,420	794	1,341
Indianapolis, Ind. ....	384	1,024	511	712	646	525	585
Kansas City, Mo. ....	369	1,241	413	680	1,097	166	1,038
Los Angeles, Calif. ....	1,603	2,339	1,524	1,673	2,451	1,315	2,394
Louisville, Ky. ....	320	919	605	623	652	580	582
Memphis, Tenn. ....	....	872	699	358	957	529	881
Miami, Fla. ....	872	....	1,511	669	1,092	1,397	1,019
Minneapolis, Minn. ....	699	1,511	....	1,051	1,018	290	985
New Orleans, La. ....	358	1,051	669	....	1,171	847	1,089
New York, N. Y. ....	957	1,092	1,018	1,171	....	1,144	83
Omaha, Nebr. ....	529	1,397	290	847	1,144	....	1,094
Philadelphia, Pa. ....	881	1,019	985	1,089	83	1,094	....
Phoenix, Ariz. ....	1,263	1,982	1,280	1,316	2,145	1,036	2,083
Pittsburgh, Pa. ....	660	1,010	743	919	317	836	259
St. Louis, Mo. ....	240	1,061	466	598	875	354	811
Salt Lake City, Utah ....	1,250	2,089	987	1,434	1,972	833	1,925
San Francisco, Calif. ....	1,802	2,594	1,584	1,926	2,571	1,429	2,523
Seattle, Wash. ....	1,867	2,734	1,395	2,101	2,408	1,369	2,380
Washington, D. C. ....	765	923	934	966	205	1,014	123

Cities	Phoenix	Pittsburgh	St. Louis	Salt Lake City	San Francisco	Seattle	Washington
Birmingham, Ala. ....	1,456	608	400	1,466	2,013	2,082	661
Boston, Mass. ....	2,300	483	1,038	2,099	2,699	2,493	393
Buffalo, N. Y. ....	1,906	178	662	1,699	2,300	2,117	292
Chicago, Ill. ....	1,453	410	262	1,260	1,858	1,737	597
Cleveland, Ohio ....	1,749	115	492	1,568	2,166	2,026	306
Dallas, Tex. ....	887	1,070	547	999	1,483	1,681	1,185
Denver, Colo. ....	586	1,320	796	371	949	1,021	1,494
Detroit, Mich. ....	1,690	205	455	1,492	2,091	1,938	396
El Paso, Tex. ....	346	1,590	1,034	689	995	1,376	1,728
Houston, Tex. ....	1,017	1,137	679	1,200	1,645	1,891	1,220
Indianapolis, Ind. ....	1,499	330	231	1,356	1,949	1,872	494
Kansas City, Mo. ....	1,049	781	238	925	1,506	1,506	945
Los Angeles, Calif. ....	357	2,136	1,589	579	347	959	2,300
Louisville, Ky. ....	1,508	344	242	1,402	1,986	1,943	476
Memphis, Tenn. ....	1,263	660	240	1,250	1,802	1,867	765
Miami, Fla. ....	1,982	1,010	1,061	2,089	2,594	2,734	923
Minneapolis, Minn. ....	1,280	743	466	987	1,584	1,395	934
New Orleans, La. ....	1,316	919	598	1,434	1,926	2,101	966
New York, N. Y. ....	2,145	317	875	1,972	2,571	2,408	205
Omaha, Nebr. ....	1,036	836	354	833	1,429	1,369	1,014
Philadelphia, Pa. ....	2,083	259	811	1,925	2,523	2,380	123
Phoenix, Ariz. ....	....	1,828	1,272	504	653	1,114	1,983
Pittsburgh, Pa. ....	1,828	....	559	1,668	2,264	2,138	192
St. Louis, Mo. ....	1,272	559	....	1,162	1,744	1,724	712
Salt Lake City, Utah ....	504	1,668	1,162	....	600	701	1,848
San Francisco, Calif. ....	653	2,264	1,744	600	....	678	2,442
Seattle, Wash. ....	1,114	2,138	1,724	701	678	....	2,329
Washington, D. C. ....	1,983	192	712	1,848	2,442	2,329	....

## Air Distances Between World Cities

Source: *Encyclopædia Britannica*.

Cities	Berlin	Buenos Aires	Cairo	Calcutta	Capetown	Caracas	Chicago
Berlin, Germany		7,411	1,923	4,400	5,949	5,200	4,458
Buenos Aires, Argentina	7,411		7,428	10,212	4,332	3,108	5,598
Cairo, Egypt	1,923	7,428		3,525	4,476	6,350	6,231
Calcutta, India	4,400	10,212	3,525		6,000	9,583	8,050
Capetown, South Africa	5,949	4,332	4,476	6,000		6,303	8,551
Caracas, Venezuela	5,200	3,108	6,350	9,583	6,303		2,480
Chicago, Ill., U. S.	4,458	5,598	6,231	8,050	8,551	2,480	
Hong Kong (Victoria) . . .	5,490	11,400	5,033	1,625	7,309	10,180	7,863
Honolulu, Hawaii . . . . .	7,384	7,653	8,925	7,075	11,655	6,000	4,315
Istanbul, Turkey	1,068	7,638	780	3,670	5,210	6,020	5,530
Lisbon, Portugal	1,410	5,900	2,365	5,607	5,208	4,038	4,004
London, England	575	6,919	2,218	4,965	5,975	4,641	4,015
Los Angeles, Calif., U. S. . .	5,849	6,148	7,675	8,208	10,165	3,610	1,741
Manila, Philippines	6,146	11,050	5,678	2,220	7,475	10,554	8,150
Mexico City, Mexico	6,119	4,609	7,807	9,500	8,620	2,222	1,690
Montreal, Canada	3,776	5,619	5,502	7,650	7,975	2,400	750
Moscow, U.S.S.R.	995	8,800	1,725	3,420	6,288	6,185	5,050
New Orleans, La., U. S. . .	5,182	4,902	6,962	8,754	8,390	1,990	760
New York, N. Y., U. S. . . .	4,026	5,295	5,701	7,920	7,845	2,100	711
Paris, France	540	6,891	2,020	4,900	5,762	4,712	4,219
Rio de Janeiro, Brazil	6,246	1,250	6,242	9,235	3,850	2,742	5,320
San Francisco, Calif., U. S.	5,744	6,467	7,554	7,880	10,340	3,900	1,875
Shanghai, China	5,823	12,295	5,290	2,128	8,179	9,510	7,155
Stockholm, Sweden	503	7,700	2,065	4,177	6,290	5,423	4,347
Sydney, Australia	10,000	7,340	8,900	5,644	6,889	9,498	9,159
Tokyo, Japan	5,623	11,601	6,005	3,210	9,234	8,772	6,410
Warsaw, Poland	320	7,550	1,604	4,044	5,807	5,550	4,721
Washington, D. C., U. S. . .	4,156	5,100	5,810	8,115	7,868	2,040	594

Cities	Hong Kong	Honolulu	Istanbul	Lisbon	London	Los Angeles	Manila
Berlin, Germany	5,490	7,384	1,068	1,410	575	5,849	6,146
Buenos Aires, Argentina	11,400	7,653	7,638	5,900	6,919	6,148	11,050
Cairo, Egypt	5,033	8,925	780	2,365	2,218	7,675	5,678
Calcutta, India	1,625	7,075	3,670	5,607	4,965	8,208	2,200
Capetown, South Africa	7,309	11,655	5,210	5,208	5,975	10,165	7,475
Caracas, Venezuela	10,180	6,000	6,020	4,038	4,641	3,610	10,554
Chicago, Ill., U. S.	7,863	4,315	5,530	4,004	4,015	1,741	8,150
Hong Kong (Victoria) . . .		5,615	5,000	6,830	6,010	7,345	715
Honolulu, Hawaii . . . . .	5,615		8,200	7,835	7,320	2,620	5,310
Istanbul, Turkey	5,000	8,200		1,965	975	6,895	5,655
Lisbon, Portugal	6,830	7,835	1,965			5,650	7,500
London, England	6,010	7,320	1,540	975		5,496	6,680
Los Angeles, Calif., U. S. . .	7,345	2,620	6,895	5,650	5,496		7,300
Manila, Philippines	715	5,310	5,655	7,500	6,680	7,300	
Mexico City, Mexico	8,820	3,846	7,160	5,400	5,605	1,445	8,825
Montreal, Canada	7,820	4,992	4,825	3,256	3,370	2,468	8,175
Moscow, U.S.S.R.	4,425	7,100	1,075	2,427	1,540	6,130	5,075
New Orleans, La., U. S. . .	8,525	4,305	6,220	4,390	4,656	1,695	8,725
New York, N. Y., U. S. . . .	8,110	5,051	5,060	3,370	3,500	2,466	8,490
Paris, France	6,020	7,525	1,390	895	210	5,711	6,655
Rio de Janeiro, Brazil	10,945	8,400	6,420	4,705	5,747	6,330	11,250
San Francisco, Calif., U. S.	7,030	2,407	6,770	5,685	5,440	345	7,015
Shanghai, China	775	5,009	5,084	6,690	5,841	6,598	1,085
Stockholm, Sweden	5,116	6,935	1,800	1,848	885	5,558	5,760
Sydney, Australia	4,540	4,996	9,258	11,250	10,515	7,450	3,880
Tokyo, Japan	1,830	3,880	5,649	6,925	6,050	5,600	1,867
Warsaw, Poland	5,155	7,438	815	1,700	890	6,048	5,810
Washington, D. C., U. S. . .	8,245	4,919	5,195	3,558	3,700	2,295	8,560

## Air Distances Between World Cities

Source: *Encyclopaedia Britannica*.

Cities	Mexico City	Montreal	Moscow	New Orleans	New York	Paris	Rio de Janeiro
Berlin, Germany	6,119	3,776	995	5,182	4,026	540	6,246
Buenos Aires, Argentina	4,609	5,619	8,300	4,902	5,295	6,891	1,250
Cairo, Egypt	7,807	5,502	1,725	6,862	5,701	2,020	6,242
Calcutta, India	9,500	7,650	3,420	8,754	7,920	4,900	9,325
Capetown, South Africa	8,620	7,975	6,288	8,390	7,845	5,762	3,850
Caracas, Venezuela	2,222	2,400	6,185	1,990	2,100	4,712	2,742
Chicago, Ill., U. S.	1,690	750	5,050	760	711	4,219	5,320
Hong Kong (Victoria)	8,820	7,820	4,425	8,525	8,110	6,020	10,945
Honolulu, Hawaii	3,846	4,992	7,100	4,305	5,051	7,525	8,400
Istanbul, Turkey	7,160	4,825	1,075	6,220	5,060	1,390	6,420
Lisbon, Portugal	5,400	3,256	2,427	4,390	3,370	895	4,705
London, England	5,605	3,370	1,540	4,656	3,500	210	5,747
Los Angeles, Calif., U. S.	1,445	2,468	6,130	1,695	2,466	5,711	6,330
Manila, Philippines	8,825	8,175	5,075	8,725	8,490	6,655	11,250
Mexico City, Mexico	.....	2,247	6,700	940	2,110	5,800	4,810
Montreal, Canada	2,247	.....	4,445	1,390	340	3,490	5,110
Moscow, U.S.S.R.	6,700	4,445	.....	5,700	4,431	1,538	7,070
New Orleans, La., U. S.	940	1,390	5,700	.....	1,161	4,846	4,798
New York, N. Y., U. S.	2,110	340	4,431	1,161	.....	3,600	4,810
Paris, France	5,800	3,490	1,538	4,846	3,600	.....	5,710
Rio de Janeiro, Brazil	4,810	5,110	7,070	4,798	4,810	5,710	.....
San Francisco, Calif., U. S.	1,870	2,557	5,863	1,960	2,606	5,680	6,655
Shanghai, China	8,120	7,141	4,232	7,830	7,460	5,855	11,510
Stockholm, Sweden	6,000	3,710	770	5,985	3,955	950	6,555
Sydney, Australia	8,005	9,900	8,950	8,950	9,865	10,500	8,425
Tokyo, Japan	7,190	6,546	4,632	6,993	6,846	6,132	11,600
Warsaw, Poland	6,350	4,044	710	5,320	4,260	845	6,363
Washington, D. C., U. S.	1,890	470	4,907	875	204	3,830	4,796

Cities	San Francisco	Shanghai	Stockholm	Sydney	Tokyo	Warsaw	Washington
Berlin, Germany	5,744	5,323	503	10,000	5,623	320	4,156
Buenos Aires, Argentina	6,487	12,295	7,700	7,340	11,601	7,550	5,100
Cairo, Egypt	7,554	5,290	2,085	8,900	6,005	1,604	5,810
Calcutta, India	7,880	2,128	4,177	5,644	3,210	4,044	8,115
Capetown, South Africa	10,340	8,179	6,290	6,889	9,234	5,807	7,888
Caracas, Venezuela	3,900	9,510	5,423	9,498	8,772	5,550	2,040
Chicago, Ill., U. S.	1,875	7,155	4,347	9,159	6,410	4,721	594
Hong Kong (Victoria)	7,030	775	5,116	4,540	1,850	5,155	8,245
Honolulu, Hawaii	2,407	5,009	6,955	4,996	3,880	7,438	4,919
Istanbul, Turkey	6,770	5,084	1,300	9,258	5,649	815	5,195
Lisbon, Portugal	5,685	6,690	1,848	11,250	6,925	1,700	3,558
London, England	5,440	5,841	885	10,515	6,050	890	3,700
Los Angeles, Calif., U. S.	345	6,598	5,558	7,450	5,600	6,048	2,295
Manila, Philippines	7,015	1,085	5,760	3,880	1,867	5,810	8,560
Mexico City, Mexico	1,870	8,120	6,000	8,005	7,195	6,350	1,890
Montreal, Canada	2,557	7,141	3,710	9,900	6,546	4,044	470
Moscow, U.S.S.R.	5,863	4,232	770	8,950	4,632	710	4,907
New Orleans, La., U. S.	1,960	7,830	4,985	8,950	6,993	5,320	875
New York, N. Y., U. S.	2,606	7,460	3,955	9,865	6,846	4,260	204
Paris, France	5,680	5,844	950	10,500	6,132	845	3,830
Rio de Janeiro, Brazil	6,655	11,510	6,555	8,425	11,600	6,363	4,796
San Francisco, Calif., U. S.	.....	6,245	5,450	7,320	5,250	5,918	2,437
Shanghai, China	6,245	.....	4,855	4,814	1,095	4,990	7,509
Stockholm, Sweden	5,450	4,855	.....	9,660	5,110	500	4,160
Sydney, Australia	7,320	4,814	9,660	.....	4,800	9,650	9,755
Tokyo, Japan	5,250	1,095	5,110	4,800	.....	5,356	6,779
Warsaw, Poland	5,918	4,990	500	9,650	5,356	.....	4,488
Washington, D. C., U. S.	2,437	7,509	4,160	9,755	6,779	4,488	.....



## The National Park System of the United States

Source: National Park Service.

The National Park System of the United States, administered by the National Park Service, a bureau of the Department of the Interior, embraces a total of 177 areas, containing approximately 22,349,000 acres in federal ownership. Started with the establishment of Yellowstone National Park in 1872, the system includes not only the most extraordinary and spectacular scenic exhibits in the United States proper and in Alaska and Hawaii but also a large number of sites distinguished for their historic or pre-historic importance or scientific interest. The number and extent of the various types of areas which comprise the system, as of June 30, 1956, are as follows:

Type of Area	Number	Federal Land (Acres)	Lands within exterior boundaries not federally owned (Acres)	Total lands within exterior boundaries (Acres)
National Parks	28	13,080,332.12	415,066.68	13,495,398.80
National Historical Parks	8	31,928.56	5,495.36	37,423.92
National Monuments	84	8,984,134.97	209,712.07	9,193,847.04
National Military Parks	11	24,541.58	2,343.36	26,884.94
National Memorial Parks	1	68,466.53	1,907.77	70,374.30
National Battlefield Parks	3	5,516.25	2,177.84	7,694.09
National Battlefield Sites	5	188.63	547.35	735.98
National Historic Sites <sup>1</sup>	10	1,314.07	2.12	1,316.19
National Memorials	12	4,426.18	58.13	4,484.31
National Cemeteries	10	215.10	5.00	220.10
National Seashore Recreational Area	1	24,705.23	3,794.77	28,500.00
National Parkways	3	84,330.42	28,453.50	112,783.92
National Capital Parks <sup>2</sup>	1	38,615.93	1,446.30	40,062.23
Total, National Park System	177	22,348,715.57	671,010.25	23,019,725.82

<sup>1</sup> San Juan is included in number of historic sites but acreage is excluded. It is Dept. of Army land administered by National Park Service by agreement. <sup>2</sup> Includes Catalina Mountain Park administered by National Capital Parks.

### National Parks

Name, location and year established as National Park	Area in U. S. ownership, acres	Outstanding characteristics
Acadia (Maine), 1919	30,864.56	Rugged seashore on Mt. Desert Island and adjacent mainland
Big Bend (Texas), 1944	694,224.70	Mountains and desert bordering the Rio Grande
Bryce Canyon (Utah), 1928	36,010.38	Area of grotesque eroded rocks brilliantly colored
Carlsbad Caverns (N. Mex.), 1930	45,846.59	One of the world's largest known caves; spectacular flight of bats.
Crater Lake (Oregon), 1902	160,290.33	Deep blue lake in crater of inactive volcano
Everglades (Florida), 1947	1,258,639.73	Sub-tropical area with abundant bird and animal life
Glacier (Montana), 1910	999,566.80	Rocky mountains with many glaciers and lakes
Grand Canyon (Arizona), 1919	673,108.31	Mile deep gorge, 4 to 18 miles wide, 217 miles long (105 in park).
Grand Teton (Wyoming), 1929	299,326.41	Picturesque range of high mountain peaks
Great Smoky Mts. (N. C.-Tenn.), 1930	507,541.96	Highest mountain range east of Black Hills; luxuriant plant life
Hawaii (Territory Hawaii), 1916	176,950.90	Spectacular volcanic area with two active volcanoes
Hot Springs (Arkansas), 1921	986.11	47 mineral hot springs said to have therapeutic value
Isle Royale (Michigan), 1940	539,338.51	Largest wilderness island in Lake Superior; great moose herd
Kings Canyon (California), 1940	453,718.38	Huge canyons; high mountains; giant sequoias
Lassen Volcanic (California), 1916	104,240.68	Only recently active volcano in United States proper
Mammoth Cave (Kentucky), 1936	50,695.73	Vast limestone labyrinth with underground river
Mesa Verde (Colorado), 1906	51,017.87	Best preserved pre-historic cliff dwellings in United States
Mount McKinley (Alaska), 1917	1,939,319.04	Highest mountain in North America; spectacular wildlife
Mount Rainier (Washington), 1899	241,571.09	Greatest single-peak glacial system in United States
Olympic (Washington), 1938	888,557.79	Finest mountain wilderness of Pacific Northwest
Platt (Oklahoma), 1906	911.97	Cold mineral springs with distinctive properties
Rocky Mountain (Colorado), 1915	255,705.97	Section of the Rocky Mountains; 65 peaks over 10,000 feet
Sequoia (California), 1890	385,258.32	Groves of giant sequoias; world's largest and probably oldest living things; includes Mt. Whitney, highest mountain in U. S. proper
Shenandoah (Virginia), 1935	193,472.98	Tree covered mountains; scenic Skyline Drive
Wind Cave (South Dakota), 1903	27,892.66	Limestone caverns in Black Hills; buffalo herd
Yellowstone (Wyoming-Montana-Idaho), 1872	2,213,206.55	World's greatest geyser area; spectacular falls and canyon; one of world's great wildlife sanctuaries
Yosemite (California), 1890	757,826.74	Mountains; inspiring gorges and waterfalls; giant sequoias
Zion (Utah), 1919	94,241.06	Multicolored gorge in heart of southern Utah desert

## National Historical Parks

Name and location	Acreage in U. S. ownership	Name and location	Acreage in U. S. ownership
Abraham Lincoln (Kentucky)	116.50	Katmai (Alaska)	2,697,590.00
Appomattox Court House (Va.)	968.25	Lava Beds (California)	46,238.69
Chalmette (Louisiana)	69.61	Lehman Caves (Nevada)	640.00
Colonial (Virginia)	7,228.58	Meriwether Lewis (Tennessee)	300.00
Cumberland Gap (Ky.-Tenn.-Va.)	20,184.20	Montezuma Castle (Arizona)	783.09
Independence (Pennsylvania)	17.11	Mound City Group (Ohio)	67.50
Morristown (New Jersey)	957.96	Muir Woods (California)	485.18
Saratoga (New York)	2,386.35	Natural Bridges (Utah)	2,649.70
		Navajo (Arizona)	360.00
		Ocmulgee (Georgia)	683.48
		Oregon Caves (Oregon)	480.00
		Organ Pipe Cactus (Arizona)	328,174.90
		Perry's Victory (Ohio)	14.25
		Petrified Forest (Arizona)	85,303.63
		Pinnacles (California)	12,817.77
		Pipe Spring (Arizona)	40.00
		Pipestone (Minnesota)	115.60
		Rainbow Bridge (Utah)	160.00
		Saguaro (Arizona)	54,990.89
		Scotts Bluff (Nebraska)	2,171.35
		Sitka (Alaska)	59.04
		Statue of Liberty (New York)	10.38
		Sunset Crater (Arizona)	3,040.00
		Timpanogos Cave (Utah)	250.00
		Tonto (Arizona)	1,120.00
		Tumacacori (Arizona)	10.00
		Tuzigoot (Arizona)	42.67
		Verendrye (North Dakota)	253.04
		Walnut Canyon (Arizona)	1,641.62
		White Sands (New Mexico)	140,247.04
		Whitman (Washington)	45.84
		Wupatki (Arizona)	34,607.03
		Yucca House (Colorado)	9.60
		Zion (Utah)	34,216.10

## National Monuments

Ackia Battleground (Miss.)	49.15	Chickamauga and Chattanooga (Georgia-Tennessee)	8,189.64
Andrew Johnson (Tennessee)	16.33	Fort Donelson (Tennessee)	102.54
Arches (Utah)	34,249.94	Fredericksburg and Spotsylvania (Virginia)	2,467.23
Aztec Ruins (New Mexico)	27.14	Gettysburg (Pennsylvania)	2,712.46
Badlands (South Dakota)	104,206.19	Guilford Courthouse (N. C.)	148.83
Bandelier (New Mexico)	27,048.89	Kings Mountain (S. C.)	4,012.00
Big Hole Battlefield (Montana)	200.00	Moores Creek (North Carolina)	42.23
Black Canyon of the Gunnison (Colorado)	13,176.02	Petersburg (Virginia)	1,505.55
Cabrillo (California)	.50	Shiloh (Tennessee)	3,707.44
Canyon de Chelly (Arizona)	83,840.00	Stones River (Tennessee)	323.86
Capitol Reef (Utah)	33,970.61	Vicksburg (Mississippi)	1,329.80
Capulin Mountain (N. Mex.)	680.42		
Casa Grande (Arizona)	472.50		
Castillo de San Marcos (Fla.)	18.51		
Castle Clinton (New York)	1.00		
Cedar Breaks (Utah)	6,172.20		
Chaco Canyon (New Mexico)	20,989.35		
Channel Islands (California)	26,819.26		
Chiricahua (Arizona)	10,480.90		
Colorado (Colorado)	17,596.43		
Craters of the Moon (Idaho)	48,003.86		
Custer Battlefield (Montana)	765.34		
Death Valley (Calif.-Nev.)	1,865,538.42		
Devils Postpile (California)	798.46		
Devils Tower (Wyoming)	1,266.91		
Dinosaur (Utah-Colorado)	190,962.13		
Effigy Mounds (Iowa)	1,204.36		
El Morro (New Mexico)	880.80		
Fort Frederica (Georgia)	94.40		
Fort Jefferson (Florida)	47,125.00		
Fort Laramie (Wyoming)	214.41		
Fort Matanzas (Florida)	227.76		
Fort McHenry (Maryland)	43.26		
Fort Pulaski (Georgia)	5,361.62		
Fort Sumter (South Carolina)	2.40		
Fort Union (New Mexico)	720.60		
Fort Vancouver (Wash.)	59.91		
Fossil Cycad (South Dakota)	320.00		
George Washington Birthplace (Virginia)	393.68		
George Washington Carver (Missouri)	210.00		
Gila Cliff Dwellings (N. Mex.)	160.00		
Glacier Bay (Alaska)	2,274,248.44		
Gran Quivira (New Mexico)	450.94		
Grand Canyon (Arizona)	193,040.00		
Great Sand Dunes (Colorado)	30,609.16		
Harpers Ferry (W. Va.-Md.)	469.23		
Homestead (Nebraska)	162.73		
Hovenweep (Utah-Colorado)	505.43		
Jewel Cave (South Dakota)	1,274.56		
Joshua Tree (California)	489,392.43		

## National Military Parks

Chickamauga and Chattanooga (Georgia-Tennessee)	8,189.64
Fort Donelson (Tennessee)	102.54
Fredericksburg and Spotsylvania (Virginia)	2,467.23
Gettysburg (Pennsylvania)	2,712.46
Guilford Courthouse (N. C.)	148.83
Kings Mountain (S. C.)	4,012.00
Moores Creek (North Carolina)	42.23
Petersburg (Virginia)	1,505.55
Shiloh (Tennessee)	3,707.44
Stones River (Tennessee)	323.86
Vicksburg (Mississippi)	1,329.80

## National Memorial Park

Theodore Roosevelt (N. Dak.)	68,466.53
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## National Battlefield Parks

Kennesaw Mountain (Georgia)	3,094.21
Manassas (Virginia)	1,731.03
Richmond (Virginia)	691.01

## National Battlefield Sites

Antietam (Maryland)	183.63
Brices Cross Roads (Mississippi)	1.00
Cowpens (South Carolina)	1.00
Fort Necessity (Pennsylvania)	2.00
Tupelo (Mississippi)	1.00

## National Historic Sites

Name and location	Acreage in U. S. ownership
Adams (Massachusetts) .....	4.77
Fort Raleigh (North Carolina) .....	18.50
Hampton (Maryland) .....	45.42
Home of Franklin D. Roosevelt (New York) .....	93.69
Hopewell Village (Pa.) .....	848.06
Jefferson National Expansion Memorial (Missouri) .....	82.58
Old Phila. Custom House (Pa.) .....	.79
Salem Maritime (Massachusetts) .....	8.61
San Juan (Puerto Rico) .....	40.00
Vanderbilt Mansion (New York) .....	211.65

## National Memorials

Coronado (Arizona) .....	2,745.33
Custis-Lee (Virginia) .....	2.71
DeSoto (Florida) .....	24.18
Federal Hall (N. Y.) .....	0.45
Fort Caroline (Florida) .....	116.38
House Where Lincoln Died (D. C.) .....	.05
Lincoln Memorial (D. C.) .....	.61
Lincoln Museum (D. C.) .....	.18
Mount Rushmore (S. Dak.) .....	1,220.32
Thomas Jefferson (D. C.) .....	1.20
Washington Monument (D. C.) .....	.37
Wright Brothers (N. C.) .....	314.40

National Cemeteries<sup>1</sup>

Name and location	Acreage in U. S. ownership
Antietam (Maryland) .....	11.36
Battleground (D. C.) .....	1.03
Fort Donelson (Tennessee) .....	15.34
Fredericksburg (Virginia) .....	12.00
Gettysburg (Pennsylvania) .....	15.55
Poplar Grove (Virginia) .....	8.72
Shiloh (Tennessee) .....	10.25
Stones River (Tennessee) .....	20.09
Vicksburg (Mississippi) .....	117.85
Yorktown (Virginia) .....	2.91

## National Seashore Recreational Area

Cape Hatteras (North Carolina) .....	24,705.23
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## National Parkways

Blue Ridge (N. C.-Va.) .....	56,244.52
George Washington Memorial (Va.-Md.) .....	3,247.28
Natchez Trace (Tenn.-Ala.-Miss.) .....	24,838.62

## National Capital Parks

National Capital Parks (D. C.-Va.-Md.-W. Va.) .....	38,615.93
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<sup>1</sup> Arlington National Cemetery, in Virginia, is not shown because it is under the jurisdiction of the Department of the Army rather than of the National Park Service.

## Museums of the United States

Source: Questionnaires to Museums.

## NEW YORK CITY

**American Academy of Arts and Letters:** 633 W. 155th St., New York 32. Open: wkdys. & Sun. during exhib. 2-5 (closed Mon.). Otherwise by appt. Free.

Painting, sculpture by members of Academy and National Institute of Arts and Letters. Winter Exhibition by candidates for Art Grants. Spring Exhibition by new members and recipients of Grants and honors. Hassam Fund purchases.

**American Museum of Natural History:** Central Park W. at 79th St., New York 24. Open: wkdys. 10-5, Sun. & hldys. 1-5. Free. Covers all branches of natural sciences except systematic botany with thorough exhibits in each field. Planetarium.

**Brooklyn Museum:** Eastern Pkwy., Brooklyn 38, N. Y. Open: wkdys. 10-5, Sun. & hldys. 1-5 (closed Xmas). Free.

European and American paintings. Egyptian collection. Art of China, Japan, India, Near East. Exhibits showing Primitive and New World cultures. American rooms. Industrial design laboratory.

**Cloisters:** Ft. Tryon Pk., New York 33. Open: wkdys. 10-5 (closed Mon.), Sun., hldys. 1-5 (May-Sept., Sun., 1-6). Free.

Cloisters, chapel, chapter house reconstructed from parts of old European structures. Frescoes, polychromed statues, stained glass, Gothic tapestries.

**Frick Collection:** 1 E. 70th St., New York 21. Open: wkdys. 10-5 (closed Mon. & mo. of Aug.), Sun. & hldys. 1-5. Free.

Paintings, prints, drawings of 14th to 19th centuries. Italian Renaissance and French sculpture and furniture. Chinese and French porcelain. Concerts, lectures.

**Guggenheim (Solomon R.) Museum, Solomon R. Guggenheim Foundation:** 1071 5th Ave. (at 88th St.), New York 28. Open: wkdys. 10-6 (closed Mon.), Sun. 12-6. Free.

Works of leading 20th century European and American painters and sculptors. Free gallery talks. Regular exhibition from museum's collection.

**Hispanic Society of America (Museum & Library):** Broadway bet. 155th & 156th Sts., New York 32. Museum open: wkdys. 10-4:30; Sun. 1-5 (closed Mon., July 4, Thns. Day, Xmas). Library open: wkdys. 1-4:30 (closed Sun., Mon., hldys., mo. of Aug.). Free.

Paintings, sculpture, decorative arts, manuscripts and incunabula, representative of Hispanic culture. Numerous works on Hispanic art, history and literature published.

**Jewish Museum:** 1109 5th Ave., New York 28. Open: Mon.-Thurs. 1-5 (closed Fri., Sat.), Sun. 11-6. Free.

Jewish ceremonial and historical objects. Works of art, past and contemporary.



**Metropolitan Museum of Art:** 5th Ave. at 82nd St., New York 28. Open: wkdys. 10-5, Sun., hldys. 1-5. Free.

Extensive collection of European and American paintings, decorative arts, prints. Egyptian, Asiatic, Classical art. Musical instruments, arms and armor. American period rooms. Costumes and textiles. *See also* Cloisters.

**Museum of Modern Art:** 11 W. 53rd St., New York 19. Open: wkdys. 11-6, Sun. 1-7. Adm. 60c (children 20c).

Founded 1929 to aid study of modern art and its application to manufacturing and practical life. Constantly changing exhibitions of contemporary painting, sculpture, photography, architecture, industrial design, films.

**Museum of the American Indian, Heye Foundation:** Broadway at 155th St., New York 32. Open: Tues.-Sat. 2-5 (closed Sun., Mon., hldys.). Free.

Archaeology and ethnology of Americas from Arctic Circle to Tierra del Fuego.

**Museum of the City of New York:** 5th Ave. at 104th St., New York 29. Open: wkdys. 10-5 (closed Mon.), Sun. 1-5, closed Xmas. Free.

History of New York City. Period costumes, furniture, miniature scenes, portraits, paintings, prints, manuscripts, silver, toys, fire engines, horse car.

**National Academy of Design:** 1083 5th Ave. (at 90th St.) New York 28. Open: wkdys. & Sun. 1-6 (during exhibitions).

Special annual exhibitions by selected organizations Oct. thru May.

**New York Historical Society:** Central Park W. at 77th St., New York 24. Open: wkdys. & Sun. 1-5, (Sat. 10-5, closed Mon., NY Day, July 4, Thnks. Day, Xmas, month of Aug.). Free.

New York city and state historical exhibits. Early American paintings and portraits. Period rooms. Audubon watercolors. John Rogers statuettes. Library of American History.

**Roosevelt (Theodore) Museum:** 28 E. 20th St., New York 3. Open: wkdys. 10-5 (closed Mon.), Sun. & hldys. 1-5 (closed Thnks. Day, Xmas, NY Day). Free.

Restored birthplace of Roosevelt. Mounted lion shot by him in Africa. Photographs, letters, trophies, personal items.

**Whitney Museum of American Art:** 22 W. 54th St., New York 19. Open: every day 1-5. Free.

Sculpture, paintings, watercolors, drawings by 20th-century American artists. Exhibitions of contemporary and historical American art.

# CHICAGO

**Art Institute of Chicago:** Michigan Ave. at Adams St., Chicago 3, Ill. Open: wkdys. 9-5, Sun. 12-5. Adm. 25c. (free Wed., Sat., Sun., hldys.).

Paintings, sculpture, prints, drawings. Oriental arts; European, American decorative arts. Thorne Miniature Rooms.

**Chicago Academy of Sciences, Museum of Natural History:** 2001 N. Clark St., Chicago 14, Ill. Open: daily 10-5. Free.

Emphasis on regional natural history. Habitat groups of existing and prehistoric animals. Study collections of North American flora and fauna.

**Chicago Historical Society:** N. Clark St. at North Ave., Chicago 14, Ill. Open: wkdys. 9:30-4:30, Sun. 12:30-5:30. Free (Sun., Mem. Day, July 4, Lab. Day 25¢.).

Exhibits and period rooms from discovery and exploration of America to present. Special emphasis on history of Chicago. Washington, Lincoln exhibits. Historical reference library.

**Chicago Natural History Museum (formerly Field Museum):** Roosevelt Rd. at Lake Shore Dr., Chicago 5, Ill. Open: wkdys. & Sun.—Nov.-Feb. 9-4; May-Aug. 9-6; Mar., Apr., Sept., Oct. 9-5 (closed Xmas and NY Day). Adm. 25¢. (free Thurs., Sat., Sun.).

Exhibits in anthropology, botany, geology, zoology. Prehistoric skeletons. Dioramas of Stone-Age Europe. Vast Egyptian collection. Model of moon.

**Museum of Science and Industry:** 57th St. at Lake Michigan, Chicago 37, Ill. Open: fall & winter—wkdys. 9:30-4 (Sat. 9:30-5:30), Sun. & hldys. 9:30-7; spring & summer—wkdys. 9:30-5:30, Sun. & hldys. 9:30-7. Free (small fee to several exhibits).

"Do it yourself" museum where learning is fun. Operating coal mine, real submarine, giant heart, Paul Bunyan house. See yourself on television; watch baby chicks hatch.

**Oriental Institute of the University of Chicago:** 1155 E. 58th St., Chicago 37, Ill. Open: wkdys. 10-12, 1-5 (closed Mon.), Sun. 10-5. Free.

Representative collections of ancient Near Eastern objects, including 40-ton human-headed winged bull from Khorsabad, 16-ft. statue of Tutankhamon from Egypt, gold ornaments from ancient Persia, ivories from Megiddo.

**Vanderpoel (John H.) Memorial Art Gallery:** Longwood Dr. at 96th St., Chicago 43, Ill. Open: wkdys. & Sun. 9-5 (closed hldys.). Free.

Paintings, watercolors, etchings, sculpture contributed by the artists in tribute to Mr. Vanderpoel.

# WASHINGTON, D. C.

**Corcoran Gallery of Art:** 17th St. at New York Ave., N. W., Washington 6, D. C. Open: wkdys. 10-4:30 (closed Mon.; Sat. 9-4:30), Sun. & hldys. 2-5 (closed Xmas, NY Day & July 4). Free.

Specializes in American art, but has notable collection of 17th century Dutch and 19th century French paintings. Per-

sian rugs, Italian majolica, Greek and Roman antiquities. Barye bronzes. American sculpture. Annual and special exhibitions of U. S. art.

**Freer Gallery of Art, Smithsonian Institution:** Jefferson Dr. at 12th St., S.W., Washington 25, D. C. Open: daily 9-4:30 (closed Xmas). Free.

Oriental paintings, sculpture, bronzes, pottery, metalwork, manuscripts. Largest extant Whistler collection.

**National Air Museum, Smithsonian Institution:** The Mall, 10th and Jefferson Dr., Washington 25, D. C. Open: daily 9-4:30 (closed Xmas). Free.

Full-sized aircraft exhibited, including Wright brothers' *Kitty Hawk Flyer*, Lindbergh's *Spirit of St. Louis*, Wiley Post's *Winnie Mae*, Bell *Supersonic X-1*. Many models.

**National Collection of Fine Arts:** Constitution Ave. at 10th St., Washington 25, D. C. Open: daily 9-4:30 (closed Xmas). Free.

Art collections given by Harriet Lane Johnston, Ralph Cross Johnson, William T. Evans, John Gellatly and others. Room devoted to Albert Pinkham Ryder.

**National Gallery of Art:** Constitution Ave. at 6th St., Washington 25, D. C. Open: wkdys. 10-5, Sun. 2-10 (closed Xmas & N Y Day). Free.

Paintings, sculpture, drawings, prints, decorative arts given by Mellon, Kress, Widener, Rosenwald, Dale, the Booths, the Garbisches and others. Index of American Design.

**Smithsonian Institution:** on the Mall, Washington 25, D. C. Open: daily 9-4:30 (closed Xmas). Free.

Maintains the following museums and art galleries: Freer Gallery of Art, National Air Museum, National Collection of Fine Arts, National Gallery of Art, U. S. National Museum. See those entries.

**United States National Museum, a Bureau of the Smithsonian Institution:** several bldgs. on the Mall, Washington 25, D. C. Open: daily 9-4:30 (closed Xmas). Free.

Exhibits in anthropology, zoology, botany, geology, paleontology, engineering, industry, history and graphic arts.

### PHILADELPHIA

**Academy of Natural Sciences of Philadelphia:** 19th and the Parkway, Philadelphia 3, Pa. Open: wkdys. 10-5 (summer 10-4), Sun. 1-5. Adm. 50c (children 25c).

Large habitat groups of animals of North America, Africa, Asia. Hall of Earth History, Audubon Bird Hall. Minerals, gems.

**Franklin Institute of the State of Pennsylvania for the Promotion of the Mechanic Arts:** 20th St. at Benj. Franklin Pkwy., Philadelphia 3, Pa. Open: wkdys. 12-5 (Sat. 10-5, closed Mon.), Sun. 12-5. Adm. 50c.

Activities grouped into 7 major categories: Benj. Franklin Memorial; monthly

Journal; lectures; library; medal awards; museum of science and industry, including planetarium; research laboratories.

**Pennsylvania Academy of the Fine Arts:** Broad and Cherry Sts., Philadelphia 2. Open: wkdys. 10-5 (closed Mon., Good Fri., July 4, Thnks. Day, Xmas, NY Day), Sun. & hldys. 1-5. Free.

Permanent collections include American art from 18th century to present. Special winter exhibit of painting, sculpture. Fall exhibit of water colors, prints.

**Philadelphia Museum of Art:** Parkway at 26th St., Philadelphia 30, Pa. Open: wkdys. & Sun. 9-5 (closed all legal hldys.). Free. Paintings: old masters, contemporary French, American, Mexican. Prints, decorative arts, period rooms. Oriental arts. Operates Colonial Chain of Houses in Fairmount Park and Rodin Museum on Parkway.

### MUSEUMS IN OTHER CITIES

**Alabama Museum of Natural History:** University of Alabama, Tuscaloosa. Open: wkdys. & Sun. 8-5. Free.

All phases of natural history with emphasis on geology. See also Mound State Monument Archaeological Museum.

**Atomic Energy, American Museum of:** Oak Ridge, Tenn. Open: wkdys. 9:30-5; Sun. 12:30-6:30. Adm. 50c (children under 12 free).

Historical development and peacetime applications of atomic energy shown by progressive demonstrations, exhibits, motion pictures, miniature atomic reactor, Van de Graaff generator, etc.

**Baseball Hall of Fame and Museum, Natl.:** Main St., Cooperstown, N. Y.

Relics, pictures, documents of baseball history. Bronze plaques of game's immortals. See also Hall of Fame in index.

**Berkshire Museum:** Pittsfield, Mass. Open: wkdys. 10-5 (closed Mon.), Sun. 2-5. Free.

Art objects from Egyptian to modern times. Paintings and sculpture. Indian and Eskimo exhibits. Birds, animals, minerals. Original "One Horse Shay."

**(Boston) Museum of Fine Arts:** 465-479 Huntington Ave., Boston 15, Mass. Open: wkdys. 10-5 (closed Mon.), Sun. 1:30-5:30. Free.

European and American paintings. Early American silver, furniture, interiors. Print collection largest in U. S. Noted Asiatic, Egyptian, Classical collections.

**Buffalo Fine Arts Academy—Albright Art Gallery:** 1285 Elmwood Ave., Buffalo 22, N. Y. Open: Sun. & Mon. 2-6, rest of wk. 10-5 (closed Thnks. Day, Xmas, NY Day). Free.

European and American paintings. Egyptian, Greek, Roman, Oriental, Spanish, French & American sculpture.

**Buffalo Museum of Science:** Humboldt Park, Buffalo, N. Y. Open: wkdys. 10-5

(Sat. 9-5), Sun. & hldys. 1:30-5:30. Free. Extensive natural history collections. African and South Sea exhibits. Chinese pottery. Babylonian seals.

**California Academy of Sciences:** Golden Gate Park, San Francisco 18. Open: wklys. & Sun. 10-5. Free.

North American and African habitat groups. Astronomical exhibits, clocks, watches, minerals, plants. Steinhart Aquarium. Morrison Planetarium.

**California Palace of the Legion of Honor:** Lincoln Park, San Francisco. Open: daily 10-5 (hldys. 1-5). Free.

European and American paintings. Rodin sculpture and drawings. Furniture, bronzes, porcelain. Egyptian art.

**Carnegie Institute:** 4400 Forbes St., Pittsburgh 13, Pa. Open: wklys. 10-5 (Tues. during winter mos. 10-10), Sun. 2-5. Free.

Department of Fine Arts: European and American paintings, ancient sculpture. Decorative and useful arts. Carnegie Museum: exhibits in history and natural history. Music Hall. Carnegie Library.

**Cincinnati Art Museum:** Eden Park, Cincinnati 6, Ohio. Open: wklys. 10-5 (Tues. Oct.-Apr., 10-10), Sun. & hldys. 2-5 (closed Thks. Day & Xmas). Free.

Painting, prints, decorative arts, period rooms, Near & Far Eastern potteries and bronzes. Egyptian, Greco-Roman, Medieval, Oriental sculptures.

**Cleveland Museum of Art:** Wade Park, Cleveland 6, Ohio. Open: wklys. 9-5 (Wed. 9 A.M.-10 P.M., Fri. 9-5, 7-10 Oct. thru May, closed Mon.), Sun. 1-6. Free.

Classical and modern art of all nations and ages. Paintings, sculpture, graphic arts, furniture, silver, prints, arms and armor, textiles. Byzantine, Medieval, Early American collections.

**Cleveland Museum of Natural History:** 2717 Euclid Ave., Cleveland 15, Ohio. Open: wklys. 9-5, Sun. 1-5:30. Free.

Mammals, birds, reptiles, fish, insects, plant models, minerals, gems. Most complete mastodon yet found. African collections. Spitz planetarium.

**Colonial Williamsburg:** Williamsburg, Va. Open: daily. Adm. \$3 for block ticket; students and servicemen \$1. Children free.

Restoration of 18th-century capital of Virginia colony: 82 colonial buildings, 375 reconstructed public buildings, etc. 80 acres of colonial gardens.

**Colorado Springs Fine Arts Center:** 30 W. Dale St., Colorado Springs, Colo. Open: wklys. 9-5 (closed Mon. from Sept. thru May), Sun. 1:30-5. Free.

Contemporary paintings. Collection of Spanish-American New Mexican Santos. Southwest Indian arts and crafts.

**Corning Glass Center:** Corning, N. Y. Open: wklys. & Sun. 9:30-5 (closed Mon.). Free.

Museum has most comprehensive collection of glass in world; Hall of Science and Industry shows many uses of glass; factory has comfortable gallery where visitors may watch glass being made.

**Currier Gallery of Art:** 192 Orange St., Manchester, N. H. Open: wklys. 10-5, Sun. 2-5. Free.

European and American paintings. Prints and drawings. American decorative arts of 18th century, including silver by Coney, Winslow, Hurd, Revere, etc.

**Davenport Public Museum:** Brady St. at 7th, Davenport, Iowa. Open: wklys. 9-5 (closed Mon.), Sun., hldys. 2-5. Free.

Science, history, applied art exhibits, including anthropology, ethnology, Oriental and Mediterranean culture. Art and Historical Library at 215 Main St.

**Denver Art Museum:** 5 separate branches. Administration offices: Schleier Gallery, 1343 Acoma St., Denver 4, Colo. Open wklys. 9-5 (Mon. 2-5, 7-9), Sun. 2-5. Free.

European, American paintings and decorative arts. Oriental, South Sea, African, Latin American, American Indian arts and crafts. Educational division.

**Denver Museum of Natural History:** City Park, Denver 6. Open: wklys. 9-5, Sun. 12-5. Free.

Natural history of North and South America, Australia and South Pacific. Habitat groups of mammals and birds. Minerals, fossil mammal and reptile skeletons, New World archaeology. Small planetarium.

**Detroit Historical Museum:** Woodward at Kirby, Detroit 2. Open: wklys. 1-10 (Sat. 9-6, closed Mon.), Sun. 1-10. Free.

Walk through streets of 1840 & 1880, automobile and industrial exhibits, period rooms, model railroad.

**Detroit Institute of Arts:** 5200 Woodward Ave., Detroit, Mich. Open: Sept.-June—wklys. 1-10 (Sat. 9-6, closed Mon.), Sun. 9-6; July & Aug.—wklys. & Sun. 9-6 (closed Mon.); closed all hldys. Free.

Survey of history as expressed in arts. Paintings, sculpture, furniture, glass, gold work, ivory, graphic arts, textiles, armor. Murals by Diego Rivera. Movies.

**Farmers' Museum:** Lake Rd., Route 80, Cooperstown, N. Y. Open: May 1-Nov. 1, 9-6 daily. Re-created Village Crossroads, Nov. 1-Apr. 30, 9-5 daily exc. Mon. Adm. \$1 (children 15¢).

Early farm and handicraft tools. School house, country store, smithy, print shop, doctor's and lawyer's offices, pharmacy, tavern, farm unit. Cardiff Giant. Operated by N. Y. State Historical Assn.

**Fenimore House:** Lake Rd., Route 80, Cooperstown, N. Y. Open: May 1-Nov. 1—daily 9-6; Nov. 1-Apr. 30 daily 9-5. Adm. 75¢ (children 15¢).



- American portraits, genre paintings. Browere life masks of Founding Fathers. Hamilton-Burr Room. James Fenimore Cooper Collection. Folk art, Shaker collection. Library. Operated by N. Y. State Historical Assn.
- Florida State Museum:** Gainesville, Fla. Open: wkdys. 9:30-5, Sun. & hldys. 1-5. Free.
- Archaeology, ethnology, ornithology and other phases of natural history. Also history and industry.
- Gardner (Isabella Stewart) Museum:** 280 The Fenway, Boston 15, Mass. Open: Tues., Thurs., Sat. 10-4, Sun. 1-4 (closed other days, natl. hldys., and during Aug.). Free.
- Renaissance art in building of Venetian palace style. Painting, sculpture, tapestries, furniture.
- Heard Museum:** 22 E. Monte Vista Rd., Phoenix, Ariz. Open (Nov. 1-May 1): wkdys. 10-5 (closed Mon.), Sun. 1-5. Free.
- Prehistoric and historic pottery, blankets, beadwork, carvings, weapons, etc. from various parts of world.
- Herron (John) Art Museum:** 110 E. 16th St., Indianapolis, Ind. Open: wkdys. 9-5 (closed Mon. & hldys.), Sun. 1-6. Free.
- European paintings from Renaissance to present. American paintings of 19th and 20th centuries. Egyptian, Greek, Asiatic sculpture and ceramics, Chinese bronzes, ceramics, jades.
- Huntington (Henry E.) Library and Art Gallery:** San Marino 9, Calif. Open: wkdys. & Sun. 1-4:30 (closed Mon. and during Oct.). Free.
- 18th century British paintings. Library of English and American history and literature. Gutenberg Bible. Franklin's autobiography in his handwriting. Botanical garden. Research facilities.
- Illinois State Museum:** Springfield, Ill. Open: wkdys. 8:30-5, Sun. 2-5. Free.
- Art gallery. Botanical and ethnological collections. Educational Loan Service Program.
- International Folk Art, Museum of (Unit of the Museum of N. Mex.):** Off Old Pecos Rd., Santa Fe, N. Mex. Open: Mon. 7-9, Tues.-Sat. 10-5, Sun. 1-5. Free.
- Collection of folk art from 50 countries. One of two such museums in world. (Other is in Sweden.)
- Layton Art Collection:** 758 N. Jefferson St., Milwaukee 2, Wis. Open: wkdys. 9-5 (closed Mon.), Sun. 2-5. Free.
- Exhibitions of selections from permanent collections, including contemporary artists.
- Los Angeles County Museum:** Exposition Park, Los Angeles 7, Calif. Open: wkdys. & Sun. 10-5 (closed Mon., Thns. Day, Xmas). Free.
- American, European, Eastern art. American, English silver. American Indian exhibits. California History Hall. Rancho La Brea Fossils.
- Marine Historical Association, Inc.:** Mystic, Conn. Open: wkdys. & Sun. 9-5 (closed Thns. Day, Xmas.). Adm. \$1.25 (children 25¢).
- Reconstructed seaport of Age of Sail. Typical waterfront street. *Charles W. Morgan*, last of wooden whaleships.
- Mint Museum of Art:** 501 Hempstead Pl., Charlotte, N. C. Open: wkdys. 10-5 (closed Mon.), Sun. 3-5. Museum closed during July and August. Free.
- American and European paintings and prints. Relics of former U. S. branch mint.
- Mound State Monument Archaeological Museum:** Moundville, Ala. Open: wkdys & Sun. 8-5. Adm. 50¢ adults, 25¢ children.
- Uncovered Indian burials, etc., of Moundville Indians. Operated by Alabama Museum of Natural History.
- Navajo Ceremonial Art, Museum of:** Camino Lejo, near old Pecos Rd., Santa Fe, N. Mex. Open: wkdys. 9-12, 1-4:30 (closed Mon.), Sun. 3-5. Adm. 25c (free Sun.).
- Sand paintings, ceremonial objects, baskets, blankets, silver. Music records of chants. Comparative material from Asia and elsewhere. Library.
- Nelson (William Rockhill) Gallery of Art and Atkins Museum of Fine Arts:** 4525 Oak, Kansas City 11, Mo. Open: wkdys. 10-5 (Fri. 1-5, closed Mon.), Sun. & hldys. 2-6 (closed NY Day, July 4, Thns. Day, Xmas). Also open Thurs. eves. 7-10 from Oct. 1-Apr. 30. Adm. 25c. (free Sat., Sun., hldys., Thurs. eves.).
- European paintings from 13th century to present. Paintings and sculpture from Kress Collection. Extensive Chinese collection. Egyptian, Greek, Roman collections. English pottery. Concerts, movies.
- New York State Historical Association:** Lake Rd., Route 80, Cooperstown, N. Y.
- Maintains Farmers' Museum and Fenimore House. See those entries. Also operates museum and library on Moses Circle in village of Ticonderoga.
- Newark Museum:** 43-49 Washington St., Newark 1, N. J. Open: Oct.-June—wkdys. 12-5:30 (Wed. & Thur. 12-5:30, 7-9:30), Sun. & hldys. 2-6; July-Sept.—wkdys. 12-5, Sun. & most hldys. 2-6. Free.
- Collections: American painting, sculpture; Tibetan, Chinese, Japanese arts; decorative arts, ancient glass & ceramics; natural science, ethnology, mechanical models. Planetarium.
- Ringling (John & Mable) museums:** Sarasota, Fla. Museum of Art, John Ringling Residence, Museum of the American Circus open wkdys. 9-4:30, Sun. 12:30-4:30. Closed Xmas and Labor Day. Adm: Art Museum \$1; Residence (incl. Circus Museum), \$1.50; Circus Museum, 50¢; general admission, \$2.

Collection of old masters and 18th-century theater in Art Museum. Elaborate furnishings in Residence. Illustrative and historical material in Circus Museum.

**Rosicrucian Egyptian, Oriental Museum:** San Jose, Calif. Open: wkdys. 9-12 & 1-5 (Sat. 1-5), Sun. 12-5. Free.

Egyptian and Oriental antiquities. Mummies, statuary, jewelry, utensils, clothing. Reproductions of Egyptian rock tomb and temple. Art gallery.

**(St. Louis) City Art Museum:** Forest Park, St. Louis 5, Mo. Open: wkdys. & Sun. 10-5 (Mon. 2:30-9:30). Free.

Collection covers all fields of fine art: painting, sculpture, graphic art, decorative art, period rooms. Public restaurant.

**San Diego, Fine Arts Gallery of:** Plaza de Panama, Balboa Park, San Diego, Calif. Open: wkdys. 10-5 (closed Mon.), Sun. 1-5:30. Free.

European, American paintings, 14th century to present, with emphasis on Spanish, Italian, Flemish and Dutch art. Asiatic arts and prints.

**San Diego Museum of Man:** California Quadrangle, Balboa Park, San Diego, Calif. Open: wkdys. 10-4:45, Sun. 12-4:45. Free. Exhibits on Egypt; primitive weapons; Choco, North American, San Diego County Indians; Mayan archaeology.

**San Diego Society of Natural History—Natural History Museum:** San Diego, Calif. Open: wkdys. & Sun. 10-4:30 (closed Xmas, NY Day). Free.

Mammals, birds, fossils, shells, plants, insects, minerals. Emphasis on Southwestern U. S., Sonora and Lower California.

**San Francisco Museum of Art:** War Memorial Bldg., San Francisco, Calif. Open: wkdys. 12-10 (Mon. 12-5), Sun. 1-5. Free. Contemporary European, American paintings, sculpture, drawings, prints, architecture, photographs, decorative arts, including work by San Francisco artists. 40-50 exhibitions annually.

**Southwest Museum, Inc.:** Marmion Way at Museum Dr., Highland Pk., Los Angeles 42,

Calif. Open: wkdys. & Sun. 1-5 (closed Mon., Xmas, July 4). Free.

American Indian exhibits, ancient and modern. Library, lectures. Casa de Adobe, reproduction of adobe hacienda, located at 4605 N. Figueroa St.; open Wed. & Sun. 2-5 P.M.

**Toledo Museum of Art:** Monroe at Scottwood, Toledo 2, Ohio. Open: wkdys. 9-5 (Mon. 1-5), Sun. hldys. 1-5. Free.

Dutch, French, English, American paintings. Old Masters. Prints, manuscripts, sculpture. Ancient, modern glass. Oriental, Egyptian art. Library, concerts. Founded by Edward Drummon Libbey.

**Virginia Museum of Fine Arts:** Boulevard at Grove Ave., Richmond 20. Open: wkdys. 11-5 (Fri. in winter 2-5, 8-10; closed Mon.), Sun. 2-5. Free Wed., Sat., Sun. (other days 30¢).

European, American, Oriental art; French and American paintings. European tapestries; imperial Russian jewels. Museum theater with annual season of 7 plays.

**Wadsworth Atheneum:** 25 Atheneum Sq., N., Hartford 3, Conn. Open: wkdys. 12-5 (Sat. 9-5, closed Mon., Gd. Fri., July 4, Labor Day, Thanks. Day, Xmas, NY Day), Sun. 2-5. Free.

European and American paintings and drawings from 1400 to present. Bronzes, porcelain, silver. American period rooms and furniture. Library, concerts, movies.

**Walters Art Gallery:** Charles and Centre Sts., Baltimore 1, Md. Open: wkdys. 11-5 (July-Aug. 11-4) (Mon., Oct.-May, 1:30-5), Sun. & hldys. 2-5 (closed NY Day, July 4, Thanks. Day, Xmas Eve, Xmas). Free.

Art from ancient empires to 19th century Europe. Important collections of Etruscan art and medieval illuminated books.

**Worcester Art Museum:** 55 Salisbury St., Worcester 9, Mass. Open: wkdys. 10-5 (Tues. in Nov.-Apr. 10-10), Sun. 2-5, hldys. 2-5 (closed July 4, Thanks. Day, Xmas). Free.

Art from Egyptian to modern times, including Far East. Emphasis on painting and sculpture. Classes, lectures, concerts, films. Professional art school.

## The Great Seal of the United States

July 4, 1776, the Continental Congress appointed a committee consisting of Benjamin Franklin, John Adams and Thomas Jefferson "to bring in a device for a seal of the United States of America." After many delays, a verbal description of a design by William Barton was finally approved by Congress on June 20, 1782. The seal shows an American bald eagle with a ribbon in its mouth bearing the

device *E pluribus unum* (One out of many). In its talons are the arrows of war and an olive branch of peace.

### "In God We Trust"

"In God We Trust" first appeared on U.S. coins after April 22, 1864, when Congress passed an act authorising the coinage of a 2-cent piece bearing this motto. Thereafter, Congress extended its use to other coins. On July 30, 1956, it became the national motto.

# THE RISE OF THE UNITED STATES

by ARTHUR M. SCHLESINGER, SR.

*Emeritus Professor of History, Harvard University*

## 1. Under the English Flag

The land now comprehended within the United States once belonged to Spain, France, England, Holland and Sweden. Spain, colonizing from Mexico in the sixteenth and seventeenth centuries, expanded over most of the Gulf Coast, Texas and the border zone westward through California. France, moving down from Canada in the eighteenth century, annexed the Mississippi Valley from the Apalachians to the Rockies. Meanwhile, in the seventeenth century, the English began peopling the Atlantic shore, and finding the Dutch already established in the present New York and the Swedes in Delaware, seized their possessions.

Notwithstanding this varied international background, United States history has been largely the product of influences emanating from the seaboard communities. Unlike the Spanish and French, the English regarded their colonies as genuine extensions of the homeland, and the settlers sowed English customs, institutions and speech so thoroughly that they eventually spread everywhere. True, the transplanted ways underwent modification, but this arose from necessities imposed by a wilderness existence and, as time went on, from a growing sense of self-sufficiency.

Organized settlement began in 1607 at Jamestown, where the first representative assembly was set up in 1619. The Pilgrims followed at Plymouth in 1620, spearheading a much larger migration of Puritans into New England. Later in the century the Quakers occupied a midway region owned by William Penn, making Philadelphia their headquarters and fanning out in every direction. By 1700 all the thirteen colonies existed but the southernmost, Georgia, which came into being in 1733. The settlers crossed the ocean to escape economic, religious and political oppression and to start anew in a land of greater opportunity.

In time, other strains reinforced the original English population: French Huguenots, Scotch Irish, Germans and minor groups, including the Dutch and Swedes already on hand. African slaves, first introduced at Jamestown in 1619, were welcomed in all the colonies, though the economic need for them was greater in the South, and the system took deeper root there than elsewhere. The people in the North engaged mainly in small farming, fishing and commerce, the Southerners largely in plantation production. Everywhere the colonists practiced self-government. When they clashed with the English-appointed governors, the colonists usually

won out by withholding appropriations.

As the population penetrated farther inland, the settlers encountered the French guarding Canada and the eastern fringes of the Mississippi Valley. In a succession of wars (1689-1763), paralleling greater struggles between the parent nations abroad, France was finally ejected from North America and Britain's dominion extended to the Mississippi. Spain fell heir to the country west of the river, though some years later Napoleon was temporarily to reclaim it for France.

## 2. Birth of the Nation

With the removal of the Gallic menace the colonists felt less dependent upon the mother country militarily, and England's change from her former policy of "salutary neglect" aroused active resentment. A series of revenue measures, starting with the Sugar Act of 1764, provoked meetings of protest, nonimportation pacts and mob demonstrations in America. Colonial home rule was at stake, also freedom of trade, and the provincials appealed to the principle: "No taxation without representation." Parliament's action in 1774 penalizing all Massachusetts for the deed of a few in dumping dutied tea into Boston Harbor led to the first armed clash at Concord and Lexington on April 19, 1775; but a year and more passed before the patriots resolved upon the hazardous step of independence. The famous Declaration of July 4, 1776, penned by Thomas Jefferson for the Second Continental Congress, justified revolution as the only means to guarantee the "unalienable Rights" of "Life, Liberty and the pursuit of Happiness." Under George Washington as commander in chief the fighting shifted from New England into the middle states and then into the south. General Gates's victory at Saratoga on October 17, 1777, brought England's ancient enemy, France, into the war; just four years later the British yielded to the Allies at Yorktown. The Peace Treaty in 1783 recognized the United States as stretching to the Mississippi.

The infant, though born and baptized, had yet to be weaned. The league of states, formed under the Articles of Confederation in 1781, proved too weak either to deal effectively with foreign countries, or to raise necessary funds, or to ensure unrestricted domestic trade. Within the states, however, Revolutionary idealism prompted action to forbid primogeniture and tax-supported religions, and the Northern commonwealths abolished slavery, a prohibition which Congress's Ordinance of 1787 extended to the territory north of the Ohio. Feebleness of government, combined



with social disturbances culminating in Shays's Rebellion in Massachusetts, made sober men tremble for the sanctity of property rights and seemed to cloud the nation's future. The Federal Convention, summoned in 1787, designed a new framework after much wrangling between rival interests and sections.

The Constitution established a government of three separate and co-ordinate departments—legislative, executive and judicial—each endowed with adequate power, and each to serve as a check and balance on the others. Within its own sphere the general government was supreme, and it exerted its will not through state officials, as under the Articles of Confederation, but immediately upon individuals. Direct popular representation was limited to the House of Representatives, the Senate being chosen by the legislatures (a system which lasted till 1913), the President designated by Electors (who in practice, however, quickly lost their deliberative function), and the Supreme Court appointed by the President and Senate for life. Opposed in many states because of its centralizing and undemocratic features, the Constitution eventually won adoption on the assurance that a bill of rights would be added to preclude federal interference with civil liberties such as freedom of speech, the press and religion. The first ten amendments, in 1791, fulfilled the promise.

Perhaps no convention would have ratified the Constitution if it had been realized that an indivisible Union would ensue. The framers, engaged in the practical task of curing the defects of the Confederation government, strewed phrases through the document that had contradictory implications. On the basis of the text it was possible for equally honest men to maintain that the states were more powerful than the nation, or that the nation overtopped the states. At one time or other nearly every legislature, given what it considered sufficient provocation, asserted the right of nullification or secession. Short of such extreme doctrines, controversy began almost immediately over the question of whether the Constitution should be construed broadly to enhance the national authority or narrowly to lessen it.

Under George Washington, President from 1789 to 1797, the new government became a going concern. Congress, guided by Secretary of the Treasury Alexander Hamilton, buttressed the public credit by arranging to pay at par the national debt and the war-incurred state debts and by creating a United States Bank modeled upon the Bank of England. These measures, especially the last, alarmed Jefferson, veteran liberal and Washington's Secretary of State. Fearing that the legislation would build up a dangerous moneyed class, he urged a strict interpretation of the Con-

stitution in opposition to Hamilton's loose-construction views. The French Revolution widened the breach, for the Jeffersonian Democrats applauded as an upsurge of liberty what the Federalists dreaded as an eruption of chaos. But both men, knowing America's defenseless state, backed Washington's decision to maintain neutrality in France's war with England. Returned to power under John Adams, the Federalists, in 1798, however, declared naval hostilities against France and passed the Alien and Sedition Acts to muzzle opposition criticism. Though Adams, defying his party, prevented a full-scale war, he lost the election of 1800 to Jefferson. The Federalists never saw office again.

### 3. Democracy and Nationalism

The farming interest, which Jefferson deemed the bulwark of free government, had steadily increased since the Revolution. As settlers trekked inland, new states joined the original thirteen: Vermont, Kentucky and Tennessee in the 1790's, with Ohio and others shortly to follow. Western pioneer life begot an intense individualism, fostered political and economic democracy, stimulated nationalism. In the South, by contrast, Eli Whitney's invention of the cotton gin in 1793 opened the way for plantation agriculture and Negro slavery to expand westward beyond the Mississippi. The growth of manufacturing in the Northeast introduced a third element into the scene. The rivalries of these sectional forces wove the principal strands of American history until the Civil War. Toward the mid-century the situation was further confused by the spread of manhood suffrage and a sudden mass immigration from Ireland and Germany.

Jefferson inaugurated the "Virginia Dynasty," his eight years giving way to two terms each of James Madison and James Monroe. He performed his greatest service by purchasing Louisiana from Napoleon in 1803, an act which, though violating his constitutional scruples, carried the flag to the Rockies and vastly enlarged the agricultural domain. With France and England again locked in conflict, depredations on American commerce gave constant provocation to war, but the peace-loving Jefferson applied economic sanctions in the form of an embargo keeping merchantmen at home. Such measures failed, however, and under Madison in 1812 Congress, goaded by the Warhawks, mostly Westerners, declared war on England. Unlike France, she had compounded her offenses by impressing American sailors and, moreover, lay exposed to land attack in Canada. But the assaults on Canada miscarried, and Britain's attempts at counter-invasion with veterans freed by Napoleon's defeat in 1814 fared little better. Unhappily, An-

drew Jackson's victory at New Orleans on January 8, 1815, occurred two weeks too late to affect the Peace Treaty of Ghent, which settled none of the prewar disputes.

Nevertheless the war experience greatly accelerated American nationalism. In 1816 Congress enacted the first protective tariff and chartered a new United States Bank on the model of Hamilton's. In 1819 the country acquired the Gulf region from Spain, who chose to sell rather than have it seized. In 1823 the President, prompted by successful revolutions in Latin America, proclaimed the Monroe Doctrine, warning Europe to keep hands off this new area of freedom.

Other events, however, prefigured growing sectional discord. Opposition to admitting Missouri as a slave state was ended in 1820 only by Congress's agreeing that the rest of the Louisiana Purchase north of the parallel marking her southern boundary should be free soil. Successive tariffs alienated Southerners as class legislation discriminating against their welfare. Touted by the astute South Carolinian, John C. Calhoun, they refurbished the doctrine of state rights as defensive armor. John Quincy Adams's administration (1825-1829) did nothing to improve conditions, and the advent of his successor, Jackson, precipitated a crisis.

Old Hickory, as indomitable in peace as in war, acted boldly against divisive tendencies, whether from the slavocracy or the money power. When South Carolina nullified the Tariff of 1832, he prepared for military action, whereupon the state accepted Congress's olive branch of a lower scale of duties. He smote financial privilege by destroying the Second United States Bank, which wielded monopolistic control over the nation's credit facilities. After eight years Jackson's lieutenant, Martin Van Buren, took over, but a business depression following the Panic of 1837 so discredited his administration that in 1840 the Whigs uproariously elected William Henry Harrison in the famous log-cabin campaign. He died after a month in office, however, and the Whigs fared hardly better with his unintended successor, John Tyler, whose strict-constructionist predictions foiled their plan to establish a third national bank.

Within the free states these years witnessed a ceaseless ferment of humanitarian agitation: crusades for public education, temperance, prison reform, labor's rights, women's rights. Humane people, viewing slavery as an anachronism and a sin, formed organizations to urge its abolition. The moderate-minded, content with demanding its exclusion from the territories, founded a series of unsuccessful parties, beginning with the election of 1840. The

South, frightened by these threats to its cherished institution, found little good in any of the movements and regarded the restless North with mounting apprehension.

#### 4. Sectional Conflict

Western expansionist zeal plus the Southern desire for more slave territory elected James K. Polk over his Whig rival, Henry Clay, in 1844. When the outgoing Congress executed the Democratic pledge to annex Texas, Polk proceeded to high-pressure England into partitioning the jointly held Oregon country at the forty-ninth parallel, and in 1846, while that was still under way, contrived a war with Mexico to acquire California and the territory eastward to Texas. American forces quickly overran northern Mexico and California, but a fiercely contested march from Veracruz through the mountains to Mexico City proved necessary before Polk achieved his goal in the Treaty of Guadalupe Hidalgo early in 1848.

The conquests approximately completed the present continental boundaries. The immediate effect, however, was to arouse sectional dissention over the question of slavery in the new Southwest. Zachary Taylor, elected by the Whigs in 1848, died in office after sixteen months, leaving the crisis in the lap of Millard Fillmore. The Compromise of 1850, piloted through Congress by Henry Clay, admitted California as a free state, left slavery in Utah and New Mexico territories to future judicial determination, and disposed of other disputes. But the settlement soon turned into unsettlement, for Fillmore's Democratic successors, Franklin Pierce and James Buchanan, supported pro-Southern policies.

The Kansas-Nebraska Act of 1854, authorizing slavery by "popular sovereignty" in the country just west of Missouri and Iowa, outraged Northerners as a base repudiation of the historic Missouri Compromise. Guerrilla warfare followed in Kansas, while in the free states the old-time antislavery elements joined with dissident Whigs and Democrats to organize the Republican party. The Republicans insisted that slavery be kept out of all federal territories. Angry contests on the floors of Congress operated like a war of nerves, convincing each side that the other was plotting its ruin. John Brown's insane attempt in 1859 to incite a servile insurrection merely poured oil on the flames. When the Republicans in 1860 elected Abraham Lincoln over a divided Democratic opposition, eleven slave states, appealing to state-rights principles, seceded and established the Confederate States of America.

For the hostilities that ensued, the North possessed the long-run advantage



of superior economic resources and man power, but before these could come into play, the South hoped to win by military prowess and perhaps by the intervention of England, which needed Southern cotton. England, however, never went quite so far, and the Southern authorities failed also to reckon with the inspired leadership of President Lincoln, who taught his people that the preservation of the Union involved not only their country's future but the democratic hope everywhere. While the North went about establishing a blockade by sea, the Confederates under Robert E. Lee brilliantly repulsed repeated land attacks on their capital, Richmond, and countered with battles on Northern soil at Antietam in 1862 and Gettysburg in 1863. But in the west they steadily lost ground until the Union forces late in 1864 swept around the southern tip of the mountains into Lee's rear and, by a pincers movement with Ulysses S. Grant before Richmond, brought final defeat the following April. As soon as military fortunes favored, Lincoln under his war powers proclaimed the emancipation of slaves in all unconquered states and districts, and the Thirteenth Amendment in 1865 universalized the decree. America at long last had caught up with the preamble of the Declaration of Independence.

Even prior to his re-election in 1864, Lincoln "with malice toward none" announced a plan to ease the return of the Southern states to their former place in the Union; but before much could be accomplished, his assassination in April, 1865, brought into office Andrew Johnson, who shared his views of reconstruction without his gifts of persuasion. Over Johnson's vetoes the radical Republicans adopted a punitive program. They imposed military rule upon the South, impeached and almost ousted the President, and exacted ratification of the Fourteenth and Fifteenth Amendments before readmitting the last states in 1870. These amendments were designed to make the freedman a full-fledged citizen and voter. Even so, federal bayonets kept Northern-controlled carpet-bag governments in power for several years more.

## 5. Business and Government

Already the Republicans were changing from a humanitarian party to one of conservative business. The war gave an immense stimulus to economic life, speeding the construction of railways, the exploitation of minerals and other resources, the development of large-scale manufacturing, the accumulation of wealth, and bringing to the fore great captains of industry and finance, who naturally turned for favors to the dominant party. Despite economic depressions after the Panics of 1873 and 1893, this alliance of business and politics

governed the country almost uninterruptedly for the rest of the century, putting successively into office Grant (for eight years), Rutherford B. Hayes, James A. Garfield, Chester A. Arthur (for Garfield's unexpired term), Benjamin Harrison and William McKinley (for two terms).

In the Hayes-Tilden election of 1876, however, the Republicans nearly came to grief, partly because of revelations of widespread graft in Grant's second administration, and partly because of disputed electoral returns from the surviving carpetbag states. A special commission, created by Congress, decided for Hayes by a strictly partisan vote. The Democrats actually won eight years later, the voters preferring Grover Cleveland to James G. Blaine, whom they suspected of political corruption. Cleveland, though defeated in 1888, triumphed again in 1892 largely because the Republicans had claimed too much for the beneficence of tariff protection. The Republicans avoided other disasters by harping upon Democratic disloyalty during the Civil War ("waving the bloody shirt") and by catering to the Northern veterans' vote with generous pensions.

Conservative Republicanism met its principal difficulties in Congress, where the Western members, supported usually by Southern Democrats, uneasily resisted capitalistic domination. The Farther West, peopling rapidly after the war, gave a fresh dimension to the nation. Thanks to the attractions of precious minerals, cattle raising and free homesteads, this last frontier yielded steadily to settled communities, and between 1876 and 1896 eight additional states entered the Union. A new sectionalism emerged in politics, for Western needs and aspirations differed at many points from those of the East. The wage earners, too, feared the growing power of Big Business, but despite mounting numbers they lacked political representation and hence concentrated on trade-union methods, forming the American Federation of Labor in 1881. The two depression periods produced violent strikes and upheavals. Labor, however, prevailed upon Congress to place restraints on immigration in order to discourage competition by underpaid workers, especially from Southern and Eastern Europe.

Legislative struggles nearly always pivoted on issues affecting the new industrial order. The problem of greenback inflation, arising from the war, was finally settled to Eastern satisfaction by the Resumption Act of 1875. The drive for higher and yet higher protection succeeded with occasional reverses until the Dingley Tariff in 1897 set a record. Congress under Western pressure took ineffective steps in 1887 and 1890 to regulate railways and business combinations, and it made some early concessions also to the Western de-



mand for free silver. During the Panic of 1893, however, Cleveland induced Congress to stop the inflation; and after the silverites, capturing the Democratic convention in 1896, failed to elect their nominee, William Jennings Bryan, the Republicans reduced silver to a minor coin and committed the country to the gold standard.

Foreign relations reflected similar tendencies, for the expanding industrial system demanded new markets, openings for investment and sources of raw materials. Cleveland withstood imperialistic sentiment, and in 1898 the McKinley administration intervened in the Cuban insurrection under the whip of popular anger at Spanish methods of repression and the explosion of the battleship *Maine* in Havana Harbor. Spain was quickly routed not only in the West Indies but also in her possessions off Asia. Though the "splendid little war" was prompted less by Wall Street than by a superheated sensational press, it bore fruit in the annexation of Puerto Rico, the Philippines and Guam, and brought businessmen further advantages through the quasi protectorate imposed on Cuba (later extended to other Caribbean countries). About the same time Hawaii and American Samoa were acquired, and Secretary of State John Hay's "open door" policy promised a growing trade with China. Theodore Roosevelt, raised to the presidency by McKinley's assassination in September, 1901, further advanced the cause by abetting a revolution against Colombia, thereby assuring the construction of the Panama Canal and much shorter distances within the colonial empire.

In domestic politics, however, Roosevelt aligned himself with the rising sentiment against business-dominated government, preaching with gusto the doctrine of the "square deal," and in his seven years breaking ground for later and more substantial advances. Despite party reactionaries he put teeth into the enforcement of the Antitrust Act of 1890, bullied Congress into tightening control over railroads and industrial monopolies, and initiated measures for conserving the nation's natural resources. William Howard Taft, his choice as successor, quietly pursued similar policies; but Taft's endorsement of the steep Payne-Aldrich Tariff together with other missteps so embittered the reformers that, failing to prevent his renomination in 1912, they organized the Progressive party to run their idol "Teddy" again. The Democrats, facing a divided opposition, elected their candidate, Woodrow Wilson.

Superbly endowed intellectually, and gifted with Jefferson's power to express democratic aspirations, Wilson proceeded with magisterial authority to climax the earlier efforts at reform. The Underwood Tariff enacted the lowest rates since the

Civil War; the Federal Reserve Act superseded an outworn national banking system; and the Clayton Act created the Federal Trade Commission to stop "unfair methods of competition." Two other measures, launched by popular demand during World War I, involved changes in the Constitution. The Eighteenth Amendment in 1920 enacted national prohibition, which ran its stormy course in thirteen years and required the Twenty-first for its undoing. The Nineteenth Amendment (1920) extended to all women the suffrage which in some states they already possessed.

## 6. World War and After

With America a neutral in 1914 when the European struggle began, the administration's chief energies turned to the protection of maritime rights. Wilson and his countrymen, hating war and traditionally isolationist, only gradually perceived the threat to national security if a militaristic Germany should supplant Britain as mistress of the Atlantic; but Berlin's revival of ruthless submarine operations a few months after Wilson's second election clarified men's minds. Congress, stirred by his appeal that "The world must be made safe for democracy," declared war on April 6, 1917. The government, racing against time, swiftly put the nation on a battle footing, enacting universal conscription taking over the railways, and regimenting industry, labor and agriculture. It was the country's introduction to total war. In the summer of 1918 Yankee troops under General John J. Pershing helped repulse a great German drive on the Marne and in September shared in the mighty Meuse-Argonne counteroffensive, which ended the struggle on November 11.

At the Paris Peace Conference, Wilson fought stubbornly for the democratic settlement he had earlier outlined under Fourteen Points, but gained principally his proposal of a League of Nations, which he saw as a sort of continuing peace conference. At home the Republican-controlled Senate, whipping up isolationist sentiment, completed his rout, for when Wilson spurned efforts to amend the treaty, that body under the two-thirds requirement rejected it by a minority vote. The tide was turning from wartime idealism to what Warren G. Harding, overwhelmingly elected by the Republicans in 1920, called "normalcy." Disclosures of corruption in high government circles hastened Harding's death, elevating Calvin Coolidge, who renewed his presidency by election a year later and was followed in 1929 by Herbert Hoover. All three, while keeping out of the League, nevertheless co-operated with some of its minor activities and, on their own, concluded a number of collective treaties for temporary naval disarmament and the outlawry of war.

These part-way steps were offset, however, by an upsurge of economic nationalism: a skyward trend of protective duties, a relaxing of controls over giant corporations, and a quota limitation on European immigration. "Rugged individualism" produced the dizziest prosperity the country had ever known, only to collapse in 1929 into the worst depression ever known. Hoover, striving vainly to repair the damage, met abject defeat in 1932 at the hands of the socially minded Franklin D. Roosevelt, who pledged a "new deal" by the Democrats. Under Roosevelt's thrilling leadership Congress, casting precedent to the winds, voted billions for relief, "primed the pump" of business and agriculture to hasten recovery, and inaugurated long-range reforms to increase foreign trade through reciprocal tariff reductions, reorganize banking practices, safeguard trade-union activities, guarantee minimum wages, destroy electrical holding companies, and provide for social insurance and a government-planned development of the Tennessee Valley.

### 7. World War Again

Toward Latin America Franklin Roosevelt adopted the "good neighbor" policy, relinquishing the Caribbean protectorates and transforming the Monroe Doctrine into a mutual nonaggression pact. As further evidence of the retreat from imperialism, Congress made provision for Philippine freedom in 1946. Relations with other parts of the world, however, posed increasing problems. As the Axis dictators and their Oriental partner, Japan, began overrunning weaker peoples, Congress under isolationist influences directed Roosevelt, against his wish, to embargo munition sales to both victim and assailant; but public opinion forced a lifting of the ban after England and France in September, 1939, took up arms against Nazi aggression. Hitler's subjugation of France the following June emboldened Roosevelt to more active steps, for crippled England now alone defended the Atlantic from totalitarian domination. Congress at his behest voted vast sums for rearmament and adopted peacetime conscription, and Roosevelt, without consulting Congress, gave England fifty destroyers in exchange for a string of naval bases located off North America.

Isolationists, mostly Republicans, denounced Roosevelt's "warmongering," while he, still clinging to measures "short of war," stressed insistently the gathering dangers to the American way of life—to freedom of speech, freedom of worship, freedom from want and freedom from fear. The people responded by choosing Roosevelt in 1940 as their first third-term President. In March 1941, he secured adoption of the lend-lease plan and soon began

using the navy to safeguard the supplies en route.

Before a crisis was reached, the Japanese war lords, irked by America's stiffening attitude toward their own conquests and gambling upon an Axis victory in Europe, treacherously attacked Pearl Harbor on December 7, clearing the way for the seizure of Guam, the Philippines and two of the Aleutians, as well as many Dutch and British holdings. Within four days Germany and Italy declared war against the United States.

America quickly girded herself for the mightiest struggle in history. Enlarging upon Wilson's wartime methods, the government completely reorganized the national economy for an unparalleled output of arms and food. By summer, sea, land and air forces were attacking the enemy all over the globe. In May 1943, after bitter fighting, Anglo-American armies expelled the Axis from North Africa, then invaded southern Italy and forced the government's submission in September, though the Nazis there kept up the fight. Landing in Normandy in June 1944, the Allies under Dwight D. Eisenhower's supreme command battered their way through France and across the Rhine, while the Russians pounded the Nazis from the east. On May 7, 1945, Germany unconditionally surrendered. The Pacific war was no less desperately contested; but the Allies, based on Australia, slowly won control of the sea and, pressing onward from island to island, hastened Japan's unconditional surrender on August 14, 1945, by loosing the atomic bomb and by Soviet Russia's last-minute entry into the conflict.

World War II was at an end, but what would be the nature of the peace? The Atlantic Charter, signed in August, 1941, by Roosevelt and Churchill and later agreed to by all the Allies, pledged them against "aggrandizement, territorial or other," but subsequent conferences by the major powers—at Cairo, Teheran, Yalta, Potsdam and elsewhere—foreshadowed a different outcome. Russia in particular demanded substantial territorial advantages. In July 1946, the Allies gathered at Paris to draw up terms for Italy and the Axis satellites: Rumania, Bulgaria, Hungary and Finland. Germany and Japan, which were under armed occupation, were reserved for later handling.

Without waiting for final military victory, fifty countries, at Roosevelt's initiative and with bipartisan support in America, had set up a successor to the League: the United Nations. Roosevelt, elected a fourth time in 1944, died suddenly on April 12, 1945, several weeks too soon to assist in framing the charter at San Francisco.



## Years of Decision: 1945-56

by LOUIS M. HACKER

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### 1. The Truman Administrations of 1945-53

Truman assumed office on the death of Roosevelt in April 1945. His Fair Deal was a continuation of the New Deal. Part of the program was enacted; part of it failed, notably Truman's request for the repeal of the Taft-Hartley Act of 1947 (which defined unfair trade-union practices). Inflexible price supports for agriculture were established, but agricultural net income from 1951 on declined as a result of contraction in domestic and foreign demand and continuing high productivity.

In foreign affairs, the Administration's program of "containment" resulted in the carrying out of the "Truman Doctrine" (1947) of military and economic aid to Greece and Turkey, then under Soviet pressures; the Marshall Plan (1948) of military and economic assistance to all countries seeking help (such grants and loans came to \$50 billion during 1945-51); and the establishment of the North Atlantic Treaty Organization (1949), largely with American financing. In 1948, the Berlin airlift rescued that city from the Russian blockade; and Administration policy led to the creation of the West German Bonn Government and agreement among the allies to free Bonn from occupation restrictions. In 1949, Truman enunciated his "Point Four" program for technical assistance to economically backward countries.

Korea became the test of Truman foreign policy. In June 1950, North Korean Communist forces crossed the 38° parallel to invade South Korea and, under American leadership, the U.N. Council declared North Korea an aggressor. U.N. forces—largely made up of American troops and headed by Gen. Douglas MacArthur—landed, met initial setbacks, but in September were able to outflank the North Koreans at Inchon and sweep north to the Yalu River (November). At this point, China entered the war (the Administration had been warned this would occur) and from thence on the fortunes of war seemed saved. In April 1951, MacArthur was relieved (for advocating an attack on Manchuria), and a stalemate set in at the 38° parallel.

### 2. The Eisenhower Administration 1953-57

Eisenhower accepted the social interests and guarantees of government as regards

the well-being of Americans; to this extent the New Deal was not abandoned. He called for highway construction, slum clearance, expanding social security, and aid for education and medical insurance. But he looked to wider state co-operation in the furtherance of such programs, including power expansion. Like Truman, he was an advocate of civil rights; and the Supreme Court in September 1954 unanimously handed down its celebrated decision for integration of Negroes and whites in the schools of the nation (which the Federal district courts began to enforce).\*

Eisenhower, however, was committed to economy in government and getting the government out of the economy. Direct controls over prices and wages were removed; efforts were made to assist small business; government activities were curtailed (in power development, control over tidal oil lands); taxes were lightened on individuals and businesses; flexible price supports for agriculture and the establishment of a "soil bank" replaced the rigid price controls; notably monetary and fiscal measures (with the Treasury and the Federal Reserve co-operating) were used in recession (1954) and inflation (1956).

As Americans were taking the initiative of making jobs for one another, per capita disposal income (evidences of mounting prosperity) went up from \$1,547 in 1946 to \$1,629 in 1955 (in dollars of 1955 purchasing power). There were more than 66.8 million in the total civilian labor force at the end of August.

In foreign affairs, the acceptance of the realities of Russian power led to the adoption of the policy of "co-existence." The unhappy war in Korea was ended by a truce in July 1953. Atomic weapons and guided missiles continued to be built, but the plan of "atoms for peace" was launched in 1953; the U. S. talked of disarmament and its willingness to accept international inspection (at Geneva in 1955); it was ready to explore cultural exchanges with Iron Curtain countries. To peace there is "no real alternative," was the Administration's position; it kept its defenses powerful, however, curtailed foreign aid, and relied more upon its own resources and purposes. America kept its allies, but was guided less by their interests and more by its own. International tensions had definitely lessened.

\* The composition of the Supreme Court in 1954 was as follows: 7 judges were appointed by Democratic Presidents (Black, Reed, Frankfurter, Douglas, Burton, Clark, Minton); 2 were appointed by President Eisenhower (Warren and Harlan). Of these, Black, Reed and Clark were from the South.



# Principal Bills and Treaties Since 1900

## PARTY ABBREVIATIONS

Dem.—Democratic  
Rep.—Republican

A.L.—American Labor  
F.L.—Farmer-Labor

Ind.—Independent  
Prog.—Progressive

Proh.—Prohibition  
Soc.—Socialist

Bill or treaty	Party	House vote		Senate vote		Date enacted
		Yea	Nay	Yea	Nay	
Hay-Pauncefote Treaty. England agreed the U. S. can build and control an Isthmian canal open to all nations on equal terms (ratified Dec. 16, 1901).		No vote required		72	6	Nov. 18, 1901
Hay-Bunau-Varilla Treaty. Granted the U. S. a ten-mile strip in Panama in perpetuity for \$10,000,000 in gold and an annuity of \$250,000.	Dem. Rep.	No vote required		9 41	15 1	Mar. 19, 1903
Pure Food and Drug Act. Made shipments in interstate commerce of adulterated foods and drugs illegal.		240	17	63	4	June 30, 1906
Immigration Act. Barred paupers, anarchists, criminals and diseased persons.						Mar. 26, 1910
Glass-Owen Bill. Established a Federal Reserve system.		298	60	43	25	Dec. 23, 1913
Federal Trade Commission. Established to enforce anti-trust laws.		No roll-call vote		53	16	Sept. 26, 1914
Clayton Antitrust Act. Prohibited monopolistic price discrimination, restrictive sales or leases, intercorporate stock holding, interlocking directorates of competing companies capitalized at \$1,000,000 or more. Exempted labor from antitrust laws and declared peaceful picketing legal.		244	54	35	24	Oct. 15, 1914
Federal Farm Loan Act. Created system of land banks to lend money to farmers on their land and permanent improvements.		No roll-call vote		58	5	July 17, 1916
Keating-Owen Act. Forbade shipping in interstate commerce of goods produced by children. (Declared unconstitutional in 1918.)		337	46	52	12	Sept. 1, 1916
Adamson Act. Limited working hours of railroad employees to 8 per day on interstate railroads.		259	36	43	28	Sept. 3-5, 1916*
Burnett Immigration Bill. Required literacy test for immigrants.		308	87	64	7	Vetoed, Jan. 29, 1917
		285	(Reconsideration vote) 106	62	19	Feb. 5, 1917
Armed Neutrality Act. Allowed American vessels to be armed in war zones.		...	...	Filibustered		Defeated, Mar. 4, 1917
Declaration of War. Against Germany (World War I).		373	50	82	6	Apr. 6, 1917
National Prohibition Act (Volstead Act). Prohibited manufacture, transportation and sale of beverages containing more than .5 per cent alcohol.		321	70	Voice vote approval		Vetoed, Oct. 27, 1919
		176	(Reconsideration vote) 55	65	20	Oct. 28, 1919
Treaty of Versailles.	Dem. Rep.	No vote required		4 35	42 13	Defeated, Nov. 19, 1919
Treaty of Versailles.	Dem. Rep.	No vote required		21 28	23 12	Defeated, Mar. 19, 1920
Emergency Quota Act. Limited annual number of immigrants from any country to 3 per cent of that nationality living in U. S. in 1910. (Renewed in 1922 for two more years.)		No record vote		78	1	May 19, 1921
Federal Intermediate Credit Act. Lent money to farmers to extent of 75 per cent of value of harvested crops and livestock.		277	3	No record vote		Mar. 4, 1923

\* As Sept. 3 was a Sunday, the bill was re-signed on the following Tuesday.

Bill or treaty	Party	House vote		Senate vote		Date enacted
		Yea	Nay	Yea	Nay	
Bonus Bill. Provided 20-year endowment policies for veterans.	Dem.	177	20	32	9	Vetoed, May 15, 1924
	Rep.	175	34	33	8	
	F.L.	1	...	2	..	
	Soc.	1	...	..	..	
	Ind.	1	...	..	..	(Reconsideration vote)
	Dem.	145	21	27	9	
	Rep.	166	57	30	17	
	F.L.	...	...	2	..	
	Soc.	1	...	..	..	
	Ind.	1	...	..	..	
Immigration Quota Law. Limited annual number of immigrants to 2 per cent of each country's residents in U. S. in 1890. After 1927, the number was to be limited annually to 150,000. Did not apply to nations of Western Hemisphere.		308	58	69	9	May 26, 1924
World Court Membership.	Dem.	No vote required		36	2	Jan. 27, 1926
	Rep.			40	14	
	F.L.			..	1	
Kellogg-Briand Pact. Outlawed wars and prescribed arbitration of international disputes.		No vote required		85	1	Jan. 15, 1929
Agricultural Marketing Act. Created federal farm board with power to lend money to farm co-operatives and to create stabilization corporations to buy farm surplus and to store and sell abroad to maintain prices.	Dem.	121	32	33	2	June 15, 1929
	Rep.	245	2	21	32	
	F.L.	1	...	..	..	
Hawley-Smoot Tariff. Very high protective tariff, averaging 40.08 per cent but giving President power to initiate reduction or increase in rates.	Dem.	14	132	5	30	June 17, 1930
	Rep.	208	20	39	11	
	F.L.	...	1	..	1	
War Debt Moratorium. Provided for moratorium on payment of interest and war debt installments by nations indebted to U. S.	Dem.	120	95	33	6	Dec. 23, 1931
	Rep.	196	5	36	6	
	F.L.	1	...	..	..	
Reconstruction Finance Corporation. Established with a working fund of \$500,000,000 and power to borrow more to release frozen assets in banks and mortgage companies and to help bankrupt railroads.	Dem.	153	43	29	5	Jan. 22, 1932
	Rep.	182	12	34	3	
Norris-LaGuardia Act. Limited granting of injunctions against labor; required open testimony in open court and outlawed yellow dog contracts.		363	13	75	5	Mar. 23, 1932
3.2 Percent Liquor Law. Legalized manufacture and sale of 3.2 wines and beers.	Dem. Rep.	No record vote		33 10	19 17	Mar. 22, 1933
Civilian Conservation Corps. Created to relieve unemployment and to work at reforestation, road building and flood control.		No roll-call vote		No roll-call vote		Mar. 31, 1933
Agricultural Adjustment Act. Created the AAA, which was authorized to limit acreage on specified crops at farmers' option and to pay benefits to farmers; money for this purpose to be raised by a process tax, which was declared unconstitutional Jan. 16, 1936.		315	98	52	31	May 12, 1933
Tennessee Valley Authority. Established to develop and sell electric power, to serve as yardstick for electricity rates, to develop rural electrification, to establish flood control, and to produce fertilizer.	Dem.	284	2	48	3	May 18, 1933
	Rep.	17	89	14	17	
	F.L.	5	...	1	..	
Federal Securities Act. Required that all stock and bond issues be registered and approved.		No roll-call vote		No roll-call vote		May 27, 1933
Home Owners Refinancing Act. Established the HOLC, which took over mortgages in exchange for bonds in order to save home owners from losing homes.		383	4	No record vote		June 13, 1933
Glass-Steagall Banking Act. Created Federal Deposit Insurance Corporation to insure deposits up to \$5000; required that private banks be either investment or deposit banks, but not both.		No record vote		No roll-call vote		June 16, 1933

Bill or treaty	Party	House vote		Senate vote		Date enacted	
		Yea	Nay	Yea	Nay		
National Industrial Recovery Act. Created NRA; authorized establishment of trade associations; suspended antitrust laws; authorized drawing-up of codes of Fair Competition to be accepted by President; guaranteed collective bargaining and required employers to accept approved maximum and minimum wage provisions. (Declared unconstitutional in 1935.)	Dem.	266	25	46	4	June 16, 1933	
	Rep.	53	50	10	20		
	F.L.	4	...	1	..		
Gold Reserve Act. Gave President power to devalue gold and to impound for treasury all gold in Federal System and to establish Exchange Stabilization Fund.	Dem.	287	2	55	1	Jan. 30, 1934	
	Rep.	68	38	10	22		
	F.L.	5	...	1	..		
Farm Mortgage Refinancing Act. Created Federal Farm Mortgage Corporation to assist farmers in payment of mortgages on easier interest terms.		No record vote		No record vote		Jan. 31, 1934	
Tydings-McDuffie Act. Gave the Philippine Islands independence.	Dem.	No roll-call vote		51	..	Mar. 24, 1934	
	Rep.			16	8		
	F.L.			1	..		
Securities and Exchange Act. Established Securities and Exchange Commission; required licensing of stock exchanges; made certain speculative practices illegal; gave Federal Reserve Board power to fix margins; required full financial statements from registered companies.	Dem.	254	11	47	1	June 6, 1934	
	Rep.	22	73	15	12		
	F.L.	4	...	..	..		
Trade Agreements Act. Authorized President to reduce tariffs by as much as 50 per cent of prevailing rates for those countries which granted the U.S. most favored nation treatment without the need for Senatorial ratification for three years.	Dem.	No record vote		51	5	June 12, 1934	
	Rep.			5	28		
	F.L.			1	..		
National Housing Act. Created Federal Housing Administration to administer funds for modernizing homes and for lending for new construction.		176	19	No record vote		June 28, 1934	
Federal Farm Bankruptcy Act (Frazier-Lemke Act). Declared moratorium on farm mortgage foreclosures. (Declared unconstitutional in May, 1935.)		No record vote		60	16	June 28, 1934	
World Court Ratification. (Defeated in Senate by lack of 2/3 majority vote.)	Dem.	No vote required		43	20	Defeated, Jan. 29, 1935	
	Rep.			9	14		
	F.L.			..	1		
	Prog.			..	1		
National Labor Relations Act (Wagner-Connery Act). Created the NLRB with power to determine appropriate collective bargaining unit subject to elections they supervised at request of the workers; to certify the duly chosen trade union and to take testimony about unfair employer practices and issue cease and desist orders.	Dem.	No record vote		49	4	July 5, 1935	
	Rep.			12	8		
	F.L.			1	..		
	Prog.			1	..		
Social Security Act. Created social security board to administer old age benefits based on earnings before the age of 65; unemployment administered under state laws and grants to states to aid the needy aged, blind, orphans, widows, etc.		372	33	76	6	Aug. 14, 1935	
Banking Act of 1935. Increased power of Federal Reserve Board of Governors over open market and credit transactions.		No record vote		No record vote		Aug. 23, 1935	
Public Utilities Act (Wheeler-Rayburn Act). Required all public utilities to register with the SEC and limited utility holding corporations to first degree unless necessity required greater complexity.	Dem.	203	59	No record vote		Aug. 26, 1935	
	Rep.	7	83				
	F.L.	3	...				
	Prog.	6	...				
Farm Mortgage Moratorium Act. Allowed three-year moratorium on foreclosures with court permission upon payment of reasonable rental.		No record vote		No record vote		Aug. 29, 1935	
Neutrality Act. Allowed President, for 6 months, to prohibit exports of arms, etc. (or their transportation by U. S. vessels) to belligerent countries.		211	83	79	2	Aug. 31, 1935	



Bill or treaty	Party	House vote		Senate vote		Date enacted
		Yea	Nay	Yea	Nay	
Soldiers' Bonus Bill. Made 9-year 3-per cent bonds redeemable on demand.	Dem.	265	29	56	9	Vetoed, Jan. 24, 1936
	Rep.	72	30	15	7	
	F.L.	3	...	2	..	
	Prog.	6	...	1	..	
	(Reconsideration vote)					
	Dem.	248	32	57	12	Jan. 27, 1936
	Rep.	66	29	16	7	
	F.L.	3	...	2	..	
Prog.	7	...	1	..		
Soil Conservation and Domestic Allotment Act. Granted payments to farmers who let their land lie fallow or planted cover crops.	Dem.	246	25	49	9	Mar. 2, 1936
	Rep.	20	64	5	11	
	F.L.	1	1	1	..	
	Prog.	...	7	1	..	
Reciprocal Trade Agreement Act. Extended to June, 1940, period during which President is authorized to negotiate foreign trade under Trade Agreements Act of 1934.		284	0	58	24	Mar. 1, 1937
Neutrality Act. Forbade export of arms and ammunition to belligerents, the sale in this country of belligerents' securities, the use of American ships for carrying munitions; required belligerents to pay upon purchase and carry all purchases in their own ships (cash and carry clause).		377	12	41	15	May 1, 1937
Judiciary Act. Allowed voluntary retirement of Supreme Court justices and other federal court judges on full pension at age of 70.		No roll-call vote		Unanimous, no roll-call vote		Aug. 25, 1937
National Housing Act. Established the U. S. Housing Authority to administer loans to local communities and states for rural and urban construction. (Amended in 1938.)		275	86	64	16	Sept. 1, 1937
Agricultural Adjustment Act. Continued soil conservation program; provided parity payments and commodity loans to farmers; established crop insurance corporations and ever-normal granary plan.	Dem.	243	54	53	17	Feb. 16, 1938
	Rep.	14	74	2	11	
	F.L.	5	...	..	2	
	Prog.	1	7	..	1	
	Ind.	...	...	1	..	
Wage and Hours Act. Provided minimum wage of 25 cents to rise to 40 cents after 6 years; limited hours from 44 per week the first year to 40 after the third year; goods produced by "oppressive child labor" could not be shipped in interstate commerce.	Dem.	247	41	No record vote		June 25, 1938
	Rep.	31	48			
	F.L.	5	...			
	Prog.	7	...			
Alien Registration Act (Smith Act). Required fingerprinting of all aliens in U. S.; made it unlawful for anyone to advocate or teach overthrow of U. S. government or to belong to any group advocating such.		382	4	No record vote		June 28, 1940
Selective Service Act. Established system for compulsory service in armed forces. (Extended in 1941.)	Dem.	211	33	50	17	Sept. 16, 1940
	Rep.	52	112	8	10	
	F.L.	...	1	..	2	
	Prog.	...	2	..	1	
	Ind.	...	...	..	1	
	A.L.	...	1	..	..	
Lend-Lease. Provided system whereby U. S. lent goods and munitions to democratic nations in return for services and goods.		260	165	60	31	Mar. 11, 1941
Selective Service Act Extension. Extended period of service to not more than 30 months in time of peace and eliminated 900,000-man limit of Army.	Dem.	182	65	38	16	Aug. 18, 1941
	Rep.	21	133	7	13	
	Prog.	...	3	..	1	
	A.L.	...	1	..	..	
Declarations of World War II: Against Japan.	Dem.	235	...	56	..	Dec. 8, 1941
	Rep.	149	1	24	..	
	Prog.	3	...	1	..	
	Ind.	...	...	1	..	
	A.L.	1	...	..	..	
Against Germany.		393	0	88	0	Dec. 11, 1941

Bill or treaty	Party	House vote		Senate vote		Date enacted
		Yea	Nay	Yea	Nay	
U. N. Charter ratification. (For full text of Charter, see index.)	Dem. Rep. Prog.	No vote required		53 35 1	.. 2 ..	July 28, 1945
Case Bill. Would have set up mediation board, established enforceable 30-day cooling-off periods in labor disputes, outlawed boycotts and sympathy strikes, and authorized court injunctions.	Dem. Rep. Prog. A.L.	97 133 ... ...	91 13 1 1	33 28 .. ..	13 6 1 ..	Vetoed, June 11, 1946
(Defeated in House by lack of 2/3 majority to override veto.)	Dem. Rep. Prog. A.L.	96 159 ... ...	118 15 1 1	.. .. .. ..	.. .. .. ..	Defeated, June 11, 1946
British Loan Act. Established \$3,750,000,000 credit to Britain, including \$650,000,000 in lend-lease.	Dem. Rep. Prog. A.L.	157 61 ... 1	32 122 1 ...	29 17 .. ..	15 18 1 ..	July 15, 1946
Atomic Energy Commission. Created five-man controlled commission without military representation but with military liaison; permitted Army and Navy to make atomic weapons; forbade distribution of fissionable materials or atomic energy information.		No record vote		No record vote		Aug. 1, 1946
Greek-Turkey Aid Bill. Authorized \$400,000,000 to furnish aid to Greece and Turkey upon application, subject to withdrawal upon request of countries, of the U. N. Security Council or General Assembly, or of President if improperly used or unnecessary.	Dem. Rep. A.L.	160 127 ...	13 93 1	32 35 ..	7 16 ..	May 22, 1947
Treaty Ratifications: With Italy.	Dem. Rep.	No vote required		37 42	3 7	June 14, 1947
With Rumania.		No vote required		Voice vote approval		June 14, 1947
With Bulgaria.		No vote required		Voice vote approval		June 14, 1947
With Hungary.		No vote required		Voice vote approval		June 14, 1947
Taft-Hartley Bill (Labor-Management Relations Act, 1947). Prohibits closed shops but allows union shops by secret vote of majority of employees; makes unions subject to damage suits for unfair labor practices, such as boycotts or jurisdictional strikes; requires unions to file financial reports; requires union leaders to file statements that they are not Communistic.	Dem. Rep. A.L.	103 217 ...	66 12 1	17 37 ..	15 2 ..	Vetoed, June 20, 1947
	Dem. Rep. A.L.	106 225 ...	71 11 1	20 48 ..	22 3 ..	June 23, 1947
Presidential Succession Act. Made Speaker of House and President of Senate pro tempore next in line after Vice President.		365	11	50	35	July 18, 1947
National Security Act of 1947. Reorganized and co-ordinated armed forces under National Military Establishment headed by Secretary of Defense (of Cabinet rank) and including Secretaries of the Army, the Navy and the Air Force.		Voice vote approval		Voice vote approval		July 26, 1947
Foreign Assistance Act of 1948. Authorized \$5.3 billion 1-year European Recovery Program, \$275 million for military aid to Greece and Turkey, \$463 million in economic and military aid for China, \$60 million for U. N. Fund for Children.	Dem. Rep. A.L.	150 167 0	11 62 2	Voice vote approval		Apr. 3, 1948
Selective Service Act. Provided for registration of all men 18-25 and induction of enough men 19-25 to maintain Army of 837,000, Navy and Marine Corps of 666,882, and Air Force of 502,000.		259	136	Voice vote approval		June 24, 1948
Displaced Persons Bill. Admitted 205,000 European displaced persons, including 3,000 orphans.		Voice vote approval		Voice vote approval		June 25, 1948
Foreign Aid Appropriations. Appropriated funds for 1 year: \$5.055 billion for ERP, \$400 million for China, \$1.3 billion for occupied areas, \$225 million for Greece and Turkey, \$35 million for U. N. Fund for Children, \$70,710,228 for IRO.		318	62	Voice vote approval		June 28, 1948

Bill or treaty	Party	House vote		Senate vote		Date enacted
		Yea	Nay	Yea	Nay	
Housing Bill. Authorized Federal loans for private construction of low-cost homes and apartments; liberalized loans to manufacturers of prefabricated houses.		351	9	Voice vote approval		Aug. 10, 1948
Bill to raise salaries: President's, \$75,000 to \$100,000 with new \$50,000 tax-free allowance; Vice President's and Speaker's, \$20,000 to \$30,000 with \$10,000 tax-free allowance.	Dem. Rep. A.L.	Voice vote approval		42 26	0 9	Jan. 19, 1949
ERP authorization: \$5,430,000,000 for European recovery, consisting of \$1,150,000,000 for April-June and \$4,280,000,000 for fiscal year starting July 1.		Voice vote approval		Voice vote approval		Apr. 19, 1949
Housing and slum-clearance bill. Provided for 810,000 dwelling units in 6 years, 5-year slum-clearance program, \$325,000,000 in loans and grants for farm housing aid.		Voice vote approval		Voice vote approval		July 15, 1949
North Atlantic Treaty. (For full text, consult index.)	Dem. Rep.	No vote required		50 32	2 11	July 21, 1949
National Security bill. Changed National Military Establishment to executive Department of Defense; made Departments of Army, Navy and Air Force "military departments."		356	7	Voice vote approval		Aug. 10, 1949
Military Assistance Program. Authorized \$1,314,010,000 in military aid: for Atlantic Pact countries, \$1 billion; Greece and Turkey, \$211,370,000; "general area" of China, \$75,000,000; and South Korea, Iran and Philippines, \$27,640,000.	Dem. Rep. A.L.	172 51 0	24 84 1	Voice vote approval		Oct. 28, 1949
Foreign-aid appropriations: \$5,809,990,000, consisting of \$4,852,380,000 for ERP, \$912,500,000 for Army-occupied areas, \$45,000,000 for Greek-Turkish aid, and \$110,000 for joint Congressional Foreign-Aid Committee.		Voice vote approval		Voice vote approval		Oct. 2, 1949
Minimum-wage bill. Raised minimum wage from 40c to 75c an hour.		131	19	Voice vote approval		Oct. 26, 1949
Farm bill. Supported prices for wheat, corn, cotton, rice, peanuts at 90% of parity through 1950, 80-90% through 1951, and 75-90% on sliding-scale basis thereafter.		175	34	46	7	Oct. 31, 1949
Natural-gas bill (Kerr bill). Would have prevented FPC control on prices for natural gas distributed by interstate pipelines.		176	174 (No reconsideration vote)	44	38	Vetoed Apr. 15, 1950
Housing bill. Authorized over \$3.5 billion in government loans and mortgage insurance for expansion of housing program. Also turned over to state and local authorities about 150 wartime and veterans' housing projects.		Voice vote approval		Voice vote approval		Apr. 20, 1950
Bill to increase Air Force and Army. Expanded Air Force to 70 groups and from 410,000 to 502,000 men; expanded Army from 592,000 to 837,000 men.		315	4	76	0	July 11, 1950
Social Security bill. Will raise present employer's and employee's 1½% payroll tax to 2% in 1954, 2½% in 1960, 3% in 1965, and 3½% in 1970; provided financial aid to permanently disabled persons in need.		374	1	Voice vote approval		Aug. 28, 1950
Omnibus appropriations bill. Appropriated \$35.554 billion, including \$62.5 million loan to Spain, \$14,680,084,443 for Defense Dept., \$1.225 billion for rearming Western Europe, \$2.526 billion for Marshall plan, \$26.9 million for Point-4 program.		Voice vote approval		Voice vote approval		Sept. 6, 1950
Defense Production Act of 1950. Gave President power to curb prices, wages, and consumer credit, and to increase defense production.		Voice vote approval		Voice vote approval		Sept. 8, 1950
Bill to draft doctors, dentists, etc., up to 50 years of age, for 21-mo. service.		Voice vote approval		Voice vote approval		Sept. 9, 1950



Bill or treaty	Party	House vote		Senate vote		Date enacted
		Yea	Nay	Yea	Nay	
Internal Security Act of 1950. Provided for registering of Communists and their internment in times of emergency.	Dem.	186	18	24	6	Vetoed
	Rep.	126	1	27	1	Sept. 22,
	A.L.	0	1	...	...	1950
			(Reconsideration vote)			
	Dem.	161	45	26	10	Sept. 23,
	Rep.	125	2	31	0	1950
	A.L.	0	1	...	...	
Emergency defense-appropriations bill. Appropriated \$17,-099,902,285, including \$3.734 billion for Navy, \$3.166 billion for Army, \$260 million for atomic-weapon research, etc.		286	30	Voice vote approval		Sept. 27, 1950
Civil-defense bill. Provided \$3.1 billion to be supplemented by state and local governments for bomb shelters and other civil defense.		Voice vote approval		Voice vote approval		Jan. 12, 1951
GI insurance law. Provided free \$10,000 life insurance to all armed-forces personnel.		Voice vote approval		Voice vote approval		Apr. 25, 1951
Reciprocal Trade Agreements Act. Extended reciprocal trade agreement act to June 12, 1953, and directed President to end any concessions to Soviet bloc.		Voice vote approval		Voice vote approval		June 16, 1951
Draft act. Extended draft to July 1, 1955, and increased service to 24 months; provided preliminary study for universal military service.		339	41	Voice vote approval		June 19, 1951
Pension bill. Raised to \$120 a month the \$60-\$72 pensions to veterans disabled by nonservice disabilities.		Voice vote approval		Voice vote approval		Vetoed Aug. 6, 1951
			(Reconsideration vote)			
		318	45	69	9	Sept. 18, 1951
German peace resolution. Declared state of war with Germany ended.		376	0	Voice vote approval		Oct. 19, 1951
Taft-Hartley Law amendment. Permitted union-shop contracts without first polling employees.		307	18	Voice vote approval		Oct. 22, 1951
Atom-data bill. Authorized exchange of certain nonweapon atom data with friendly nations.		Voice vote approval		Voice vote approval		Oct. 30, 1951
Mutual Security Appropriation Bill. \$7,328,903,976 voted for global military and economic aid, including \$100 million for Spain.		Voice vote approval		Voice vote approval		Oct. 31, 1951
Japanese Peace Treaty. Formally ended state of war declared Dec. 7, 1941.		No vote required		66	10	Mar. 20, 1952
Tidelands Oil Bill. Gave clear title to states for submerged oil and other mineral deposits off their shores.		247	89	50	35	Vetoed, May 29, 1952
			(No reconsideration vote)			
McCarran-Walter Immigration and Nationality Act. Ended racial bars on immigration and retained quota system based on national origin.		205	53	Voice vote approval		Vetoed, June 25, 1952
			(Reconsideration vote)			
	Dem.	107	90	25	18	June 27,
	Rep.	170	23	32	8	1952
	Ind.	1	0	...	...	
West German Peace Contracts. Established working basis for relations with Bonn Government.		No vote required		77	5	July 1, 1952
New Puerto Rican Constitution. Made Puerto Rico a commonwealth and gave it greater home rule.		Voice vote approval		Voice vote approval		July 3, 1952
Fair Trade Acts of 1952. Allowed manufacturers and retailers to set prices on trade-marked articles where state laws concur.		196	10	64	16	July 14, 1952
Korea "G.I. Bill of Rights." Granted Korean veterans with 90 days service as of June 27, 1950, rights and benefits similar to those received by veterans of World War II.		322	1	Voice vote approval		July 16, 1952

Bill or treaty	Party	House vote		Senate vote		Date enacted
		Yea	Nay	Yea	Nay	
Social Security Amendment. Increased Social Security benefits to aged by 12½% and authorized pensioners to earn up to \$75 a month. Minimum payments set at \$5 a month.		Voice vote approval		Voice vote approval		July 18, 1952
Tidelands Oil Law. Gave coastal states right to all minerals in submerged lands within their historic boundaries; Federal government retained control of remainder of continental shelf.	Dem. Rep. Ind.	97 188 0	59 18 1	Voice vote approval		May 22, 1953
Foreign-Aid Authorization Act. Provided \$4,531,507,000 for military and economic aid to 53 free countries.	Dem. Rep. Ind.	126 94 1	29 80 0	Voice vote approval		Aug. 7, 1953
Refugee Immigration Act. Admitted 214,000 refugees in next 3 years over immigration quotas.		190	44	Voice vote approval		Aug. 7, 1953
Statehood for Hawaii and Alaska. (Allowed to die in House.)	Rep. Dem. Ind.	... ... ...	... ... ...	3 42 1	41 2 0	Defeated, 1954
Bricker Amendment. Would have limited President's treaty-making power. (Defeated by lack of ⅔ majority vote.)	Rep. Dem. Ind.	... ... ...	... ... ...	32 28 0	16 14 1	Defeated, Feb. 25, 1954
Cut in excise tax by \$999 million a year.		395	1	72	8	Apr. 1, 1954
Authorization of St. Lawrence Seaway.	Rep. Dem. Ind.	144 96 1	64 94 0	Voice vote approval		May 13, 1954
Extension of Reciprocal Trade Act for 1 year.		Voice vote approval		Voice vote approval		July 1, 1954
Public-housing bill. Allowed 35,000 units for year, but limited housing to cities where Federal slum clearance had displaced families.		358	30	59	21	Aug. 2, 1954
Tax revision to cost \$1.363 million in revenue.	Rep. Dem. Ind.	201 114 0	3 73 1	42 19 0	3 22 1	Aug. 16, 1954
Communist Control Act. Outlawed Communist party, though membership in party was not made crime.		265	2	79	0	Aug. 24, 1954
Compromise Mutual Security Appropriation of \$5,243,575,-795, of which \$2,781,499,816 is "new money."		188	77	Voice vote approval		Aug. 26, 1954
Farm bill. Provided flexible price support.		208	47	44	28	Aug. 28, 1954
Amendment to Atomic Energy Act of 1946. Allowed private interests to enter field of atomic power.	Rep. Dem. Ind.	Voice vote approval		6 38 1	35 6 0	Aug. 30, 1954
Social Security benefits increased and extended to additional 10,000,000 persons.		Voice vote approval		Voice vote approval		Sept. 1, 1954
Death penalty for peacetime espionage.		Voice vote approval		Voice vote approval		Sept. 3, 1954
Revocation of citizenship of persons convicted by conspiracy to overthrow government by force.		Voice vote approval		Voice vote approval		Sept. 3, 1954
Federal pay raise bill. Raised salaries of Senate and House members to \$22,500; Vice President and House Speaker to \$45,000; Justices of U. S. Supreme Court to \$35,000; etc.	Dem. Rep.	119 104	53 60	Voice vote approval		Mar. 2, 1955

Bill or treaty	Party	House vote		Senate vote		Date enacted
		Yea	Nay	Yea	Nay	
Military pay raise bill. Provided pay raise for armed services amounting to \$745 million per year.		Voice vote approval		Voice vote approval		Mar. 31, 1955
Postal pay raise bill. Increased pay of postal workers by average of 8.8%.	Dem. Rep.	212 116	0 66	37 29	0 11	Vetoed May 19, 1955
(Defeated in Senate by lack of 2/3 majority vote to override veto.)	Dem. Rep.	(Reconsideration vote)				Defeated May 24, 1955
		...	...	46 8	2 37	
Postal pay raise bill. Increased pay of postal workers by average of 8%.		407	1	78	0	June 10, 1955
Reciprocal-trade bill. Extended reciprocal-trade law 3 years to June 30, 1958, and increased tariff-cutting powers of President.		347	54	Voice vote approval		June 21, 1955
Selective Service bill. Extended draft 4 years and doctors' draft 2 years.		388	5	Voice vote approval		June 30, 1955
Foreign-aid authorization bill. Authorized \$3,285,800,000 for foreign-aid program.		262	120	Voice vote approval		July 8, 1955
Funds for Dixon-Yates transmission line included in appropriations bill.		Voice vote approval		Voice vote approval <sup>1</sup>		Ordered canceled, July 11, 1955 <sup>2</sup>
Military reserves bill. Raised present 800,000-man reserve to 2,900,000 by mid-1959.	Dem. Rep.	169 146	38 40	Voice vote approval		Aug. 9, 1955
Housing bill. Authorized construction of 45,000 public-housing units by mid-1956.	Dem. Rep.	153 35	37 131	Voice vote approval		Aug. 11, 1955
Federal minimum-wage bill. Increased minimum from 75¢ to \$1 per hour.	Dem. Rep.	192 170	29 25	Voice vote approval		Aug. 12, 1955
Harris-Fulbright bill. Would have exempted natural-gas producers from direct Federal rate control.	Dem. Rep.	86 123	136 67	22 31	24 14	Vetoed, Feb. 17, 1956
		(No reconsideration vote)				
Upper Colorado River project bill. Authorized \$756 million for irrigation and reclamation in Upper Colorado River basin.		Voice vote approval		Voice vote approval		Apr. 11, 1956
Agricultural Act of 1956. Would have set up "soil bank" program and would have restored high rigid support prices.	Dem. Rep.	189 48	35 146	35 15	4 31	Vetoed, Apr. 15, 1956
(Defeated in House by lack of 2/3 majority vote to override veto.)	Dem. Rep.	(Reconsideration vote)				Defeated, Apr. 18, 1956
		182 20	38 173	...	...	
Compromise farm bill. Authorized \$1.2 billion "soil bank" program for paying farmers to withdraw acres from production.	Dem. Rep.	172 132	12 47	Voice vote approval		May 28, 1956
Highway bill. Called for expenditure of \$33.482 billion for road building (\$28.057 billion Federal expenditure and \$5.425 billion outlay by states).		Voice vote approval		89	1	June 29, 1956
National-defense bill. Appropriated \$34.6 billion for national defense, including \$16.5 billion for Air Force.		377	0	88	0	July 2, 1956
School bill. Would have provided \$1.6 billion in Federal aid for school construction.	Dem. Rep.	119 75	105 119	...	...	Defeated, July 5, 1956 <sup>3</sup>
Foreign-aid authorization bill. Authorized \$4 billion for foreign-aid program for another year.		No record vote		No record vote		July 18, 1956
Social Security bill. Made women eligible for benefits at 62, totally disabled workers at 50.		Voice vote approval		Voice vote approval		Aug. 1, 1956
Housing bill. Provided for 70,000 new Federally subsidized housing units for next 2 years and liberalized Federal aid to private housing.		Voice vote approval		Voice vote approval		Aug. 7, 1956

<sup>1</sup> Passed with added provisions and sent back to House. <sup>2</sup> Dixon-Yates contract ordered canceled by President and funds dropped by Congress from appropriations bill. <sup>3</sup> Bill killed, since all money bills must originate in House.



## How a Bill Becomes a Law

When a Senator or a Representative introduces a bill, he sends it to the clerk of his house, who gives it a number and title. This is the *first reading*, and the bill is referred to the proper committee.

The committee may decide the bill is unwise or unnecessary and *table* it, thus killing it at once. Or it may decide the bill is worthwhile and hold hearings to listen to facts and opinions presented by experts and other interested persons. After members of the committee have debated the bill and perhaps offered amendments, a vote is taken; and if the vote is favorable, the bill is sent back to the floor of the house.

The clerk reads the bill sentence by sentence to the house, and this is known as the *second reading*. Members may then debate the bill and offer amendments. In the House of Representatives, the time for debate is limited by a *cloture rule*, but there is no such restriction in the Senate except by a two-thirds vote for cloture. This makes possible a *filibuster*, in which one or more opponents hold the floor to defeat the bill.

The *third reading* is by title only, and the bill is put to a vote, which may be by voice or roll call, depending on the circumstances and parliamentary rules. Members who must be absent at the time but who wish to record

their vote may be paired if each negative vote has a balancing affirmative one.

The bill then goes to the other house of Congress, where it may be defeated, or passed with or without amendments. If the bill is defeated, it dies. If it is passed with amendments, a joint Congressional committee must be appointed by both houses to iron out the differences.

After its final passage by both houses, the bill is sent to the President. If he approves, he signs it, and the bill becomes a law. However, if he disapproves, he *veto*es the bill by refusing to sign it and sending it back to the house of origin with his reasons for the veto. The objections are read and debated, and a roll-call vote is taken. If the bill receives less than a two-thirds vote, it is defeated and goes no farther. But if it receives a two-thirds vote or greater, it is sent to the other house for a vote. If that house also passes it by a two-thirds vote, the President's veto is *overridden*, and the bill becomes a law.

Should the President desire neither to sign nor to veto the bill, he may retain it for ten days, Sundays excepted, after which time it automatically becomes a law without signature. However, if Congress has adjourned within those ten days, the bill is automatically killed, that process of indirect rejection being known as a *pocket veto*.

## National Committee Chairmen Since 1921

Source: Republican and Democratic National Committees.

Chairman and (state)	Term	Chairman and (state)	Term
Republican		Republican (Contd.)	
John T. Adams (Iowa).....	1921-24	Leonard W. Hall (N. Y.).....	1953-
William M. Butler (Mass.).....	1924-28	Democratic	
Hubert Work (Colo.).....	1928-29	Cordell Hull (Tenn.).....	1921-24
Claudius H. Huston (Tenn.).....	1929-30	Clem Shaver (W. Va.).....	1924-28
Simeon D. Fess (Ohio).....	1930-32	John J. Raskob (N. Y.).....	1928-32
Everett Sanders (Ind.).....	1932-34	James A. Farley (N. Y.).....	1932-40
Henry P. Fletcher (Pa.).....	1934-36	Edward J. Flynn (N. Y.).....	1940-43
John Hamilton (Kans.).....	1936-40	Frank C. Walker (Mont.).....	1943-44
Joseph W. Martin, Jr. (Mass.).....	1940-42	Robert E. Hannegan (Mo.).....	1944-47
Harrison E. Spangler (Iowa).....	1942-44	J. Howard McGrath (R. I.).....	1947-49
Herbert Brownell, Jr. (N. Y.).....	1944-46	William M. Boyle, Jr. (Mo.).....	1949-51
Carroll Reece (Tenn.).....	1946-48	Frank E. McKinney (Ind.).....	1951-52
Hugh D. Scott, Jr. (Pa.).....	1948-49	Stephen A. Mitchell (Ill.).....	1952-54
Guy G. Gabrielson (N. J.).....	1949-52	Paul M. Butler (Ind.).....	1955-
Arthur E. Summerfield (Mich.).....	1952-53		
C. Wesley Roberts (Kans.).....	1953-53		

Republican National Committee: 1625 I St., Washington 6, D. C.

Democratic National Committee: 1001 Connecticut Ave., Washington 6, D. C.

## The Confederate States of America

State	Seceded from Union	Readmitted to Union	State	Seceded from Union	Readmitted to Union
1. South Carolina.....	Dec. 20, 1860	July 18, 1866	7. Texas.....	Mar. 2, 1861	Mar. 30, 1870
2. Mississippi.....	Jan. 9, 1861	Feb. 23, 1870	8. Virginia.....	Apr. 17, 1861	Jan. 27, 1870
3. Florida.....	Jan. 10, 1861	June 25, 1868	9. Arkansas.....	May 6, 1861	June 22, 1868
4. Alabama.....	Jan. 11, 1861	July 13, 1868	10. North Carolina.....	May 20, 1861	July 20, 1868
5. Georgia.....	Jan. 19, 1861	July 15, 1870	11. Tennessee.....	June 24, 1861	July 24, 1866
6. Louisiana.....	Jan. 26, 1861	May 26, 1865			

NOTE: 4 other slave states—Delaware, Kentucky, Maryland and Missouri—remained in the Union.

## Diplomatic Personnel To and From the U. S.

(As of Sept. 1956.) Source: U. S. Department of State.

Country	U. S. Representative to	Rank	Representative from	Rank
Afghanistan .....	Sheldon T. Mills	Amb.	Mohammad Kabir Ludin	Amb.
Argentina .....	Willard L. Beaulac	Amb.	Dr. Don Adolfo A. Viechi	Amb.
Australia .....	Douglas M. Moffat	Amb.	Sir Percy Spender	Amb.
Austria .....	Llewellyn E. Thompson	Amb.	Dr. Karl Gruber	Amb.
Belgium .....	Frederick M. Alger, Jr.	Amb.	Baron Silvercruijs	Amb.
Bolivia .....	Gerald A. Drew	Amb.	Don Victor Andrade	Amb.
Brazil .....	Ellis O. Briggs	Amb.	Ernani do Amaral Peixoto	Amb.
Bulgaria <sup>1</sup> .....	.....	.....	.....	.....
Burma .....	Joseph C. Satterthwaite	Amb.	U Win	Amb.
Cambodia .....	Robert McClintock	Amb.	Nong Kimny	Amb.
Canada .....	Livingston T. Merchant	Amb.	A. D. P. Heeney	Amb.
Ceylon .....	Phillip K. Crowe	Amb.	R. S. S. Gunewardene	Amb.
Chile .....	Cecil B. Lyon	Amb.	Mario Rodriguez A.	Amb.
China <sup>2</sup> .....	Karl L. Rankin	Amb.	Dr. Hollington K. Tong	Amb.
Colombia .....	Philip W. Bonsal	Amb.	Dr. Don Francisco Urrutia	Amb.
Costa Rica .....	Robert F. Woodward	Amb.	Don Fernando Fournier	Amb.
Cuba .....	Arthur Gardner	Amb.	Dr. Miguel Angel Campo	Amb.
Czechoslovakia .....	U. Alexis Johnson	Amb.	Dr. Karel Petřelka	Amb.
Denmark .....	Robert D. Coe	Amb.	Henrik de Kauffmann	Amb.
Dominican Republic .....	William T. Pfeiffer	Amb.	Dr. Joaquín E. Salazar	Amb.
Ecuador .....	Christian M. Ravndal	Amb.	Dr. Teodoro Alvarado-Garaicoa	Amb.
Egypt .....	Raymond A. Hare	Amb.	Dr. Ahmed Hussein	Amb.
El Salvador .....	Thomas C. Mann	Amb.	Dr. Don Héctor David Castro	Amb.
Estonia .....	Legation closed	....	Johannes Kalv <sup>4</sup>	Amb.
Ethiopia .....	Joseph Simonson	Amb.	Yilma Deressa	CG
Finland .....	John D. Hickerson	Amb.	Johan A. Mykopp	Amb.
France .....	C. Douglas Dillon	Amb.	Herve Alphan	Amb.
Germany .....	James B. Conant	Amb.	Dr. Heinz L. Krekeler	Amb.
Great Britain .....	Winthrop W. Aldrich	Amb.	Sir Harold A. Caccia	Amb.
Greece .....	George V. Allen	Amb.	George V. Melas	Amb.
Guatemala .....	Edward J. Sparks	Amb.	José Luis Cruz-Salazar	Amb.
Haiti .....	Roy Tasco Davis	Amb.	Mauclair Zephirin	Amb.
Honduras .....	Whiting Willauer	Amb.	Dr. Policarpo Callejas B.	Cd'A
Hungary .....	Edward T. Wailes	Min.	Dr. Péter Kós	Min.
Iceland .....	John J. Muccio	Amb.	Thor Thors	Amb.
India .....	John Sherman Cooper <sup>5</sup>	Amb.	Gaganvihari Lallubhai Mehta	Amb.
Indonesia .....	Hugh S. Cumming, Jr.	Amb.	Moekarto Notowidigdo	Amb.
Iran .....	Seldon Chapin	Amb.	Dr. Ali Amiri	Amb.
Iraq .....	Waldemar J. Gallman	Amb.	Dr. Moussa Al-Shabandar	Amb.
Ireland .....	William H. Taft, 3rd	Amb.	John Joseph Hearne	Amb.
Israel .....	Edward B. Lawson	Amb.	Abba Eban	Amb.
Italy .....	Clare Boothe Luce	Amb.	Manlio Brosio	Amb.
Japan .....	John M. Allison	Amb.	Masayuki Tani	Amb.
Jordan .....	Lester D. Mallory	Amb.	Abdul Monem Rifa'i	Amb.
Korea .....	Walter C. Dowling	Amb.	Dr. You Chan Yang	Amb.
Laos .....	J. Graham Parsons	Amb.	Ourot R. Souvannavong	Amb.
Latvia .....	Legation closed	....	Dr. Arnolds Spekke	Min.
Lebanon .....	Donald R. Heath	Amb.	Dr. Victor A. Khouiri	Amb.
Liberia .....	Richard Lee Jones	Amb.	George A. Padmore	Amb.
Libya .....	John L. Tappin	Amb.	Saddigh Muntasser	Amb.
Lithuania .....	Legation closed	....	Povilas Zadeikis	Min.
Luxemburg .....	Wiley Thomas Buchanan, Jr.	Amb.	Hugues Le Gallais	Amb.
Mexico .....	Francis White	Amb.	Don Manuel Tello	Amb.
Morocco .....	Cavendish W. Cannon	Amb.	.....	....
Nepal .....	John Sherman Cooper <sup>5</sup>	Amb.	Gen. Shanker Shamsher Jang Bahadur Rana	Amb.
Netherlands .....	H. Freeman Matthews	Amb.	Dr. J. H. van Roijen	Amb.
New Zealand .....	Robert C. Hendrickson	Amb.	Sir Leslie Knox Munro	Amb.
Nicaragua .....	Thomas E. Whelan	Amb.	Dr. Don Guillermo Sevilla-Sacasa	Amb.

Country	U. S. Representative to	Rank	Representative from	Rank
Norway .....	L. Corrin Strong	Amb.	Wilhelm Munthe de Morgenstierne	Amb.
Pakistan .....	Horace A. Hildreth	Amb.	Mohammed Ali	Amb.
Panamá .....	Julian F. Harrington	Amb.	Don Joaquín José Vallarino	Amb.
Paraguay .....	Arthur A. Ageton	Amb.	Dr. Don Guillermo Enciso-Velloso	Amb.
Peru .....	Theodore C. Achilles	Amb.	Don Fernando Berckemeyer	Amb.
Philippines .....	Albert F. Nufer	Amb.	Gen. Carlos P. Romulo	Amb.
Poland .....	Joseph E. Jacobs	Amb.	Romuald Spasowski	Amb.
Portugal .....	James C. H. Bonbright	Amb.	Luís Esteves Fernandes	Amb.
Rumania .....	Robert H. Thayer	Min.	Silviu Brucan	Min.
Saudi Arabia .....	George Wadsworth <sup>2</sup>	Amb.	Sheikh Adbullah Al-Khayyal	Amb.
Spain .....	John Lodge	Amb.	Don José M. de Areilza	Amb.
Sudan .....	Lowell C. Pinkerton	Amb.		
Sweden .....	John M. Cabot	Amb.	Erik Boheman	Amb.
Switzerland .....	Frances E. Willis	Amb.	Henry de Torrenté	Min.
Syria .....	James S. Moose, Jr.	Amb.	Dr. Farid Zeineddine	Amb.
Thailand .....	Max Waldo Bishop	Amb.	Pote Sarasin	Amb.
Tunisia .....	G. Lewis Jones	Amb.	Mongi Slim	Amb.
Turkey .....	Fletcher Warren	Amb.	Haydar Gök	Amb.
Un. of So. Africa ..	Henry A. Byroade	Amb.	Dr. John E. Holloway	Amb.
U.S.S.R. ....	Charles E. Bohlen	Amb.	Georgi N. Zaroubin	Amb.
Uruguay .....	Jefferson Patterson	Amb.	Dr. José A. Mora	Amb.
Venezuela .....	Dempster McIntosh	Amb.	Dr. César Gonzáles	Amb.
Viêtnam .....	G. Frederick Reinhardt	Amb.	Tran Van Chuong	Amb.
Yemen .....	George Wadsworth <sup>3</sup>	Min.	Sayed Abdurrahman Ibn Abdussamed Abu-Taled	Cd'A
Yugoslavia .....	James W. Riddleberger	Amb.	Leo Mates	Amb.

<sup>1</sup> U. S. broke off diplomatic relations with Bulgaria on Feb. 20, 1950. <sup>2</sup> Accredited to Saudi Arabia and Yemen resident Jidda. <sup>3</sup> Formosa (Taiwan). <sup>4</sup> Legation in New York. <sup>5</sup> Accredited to India and Nepal; resident in New Delhi, India.

(Amb.—Ambassador; Min.—Minister; CG—Consul General; Cd'A—Charge d'Affaires)

## Assassinations and Attempts in U. S. Since 1865

**CERMAK, Anton J.** (Mayor of Chicago):

Shot Feb. 15, 1933, in Miami by Giuseppe Zangara, who attempted to assassinate Franklin D. Roosevelt; Cermak died Mar. 6.

**GARFIELD, James A.** (President of U. S.): Shot July 2, 1881, in Washington, D. C., by Charles J. Guiteau; died Sept. 19.

**LINCOLN, Abraham** (President of U. S.): Shot Apr. 14, 1865, in Washington, D. C., by John Wilkes Booth; died Apr. 15.

**LONG, Huey P.** (U. S. Senator from Louisiana): Shot Sept. 8, 1935, in Baton Rouge by Dr. Carl A. Weiss; died Sept. 10.

**McKINLEY, William** (President of U. S.): Shot Sept. 6, 1901, in Buffalo by Leon Czolgosz; died Sept. 14.

**ROOSEVELT, Franklin D.** (President-elect of U. S.): Escaped assassination unhurt Feb. 15, 1933, in Miami. See Cermak.

**ROOSEVELT, Theodore** (ex-President of U. S.): Escaped assassination (though shot) Oct. 14, 1912, in Milwaukee while campaigning for President.

**SEWARD, William H.** (Secretary of State): Escaped assassination (though injured) Apr. 14, 1865, in Washington, D. C., by Lewis Powell (or Paine), accomplice of John Wilkes Booth.

**TRUMAN, Harry S.** (President of U. S.): Escaped assassination unhurt Nov. 1, 1950, in Washington, D. C., as 2 Puerto Rican nationalists attempted to shoot their way into Blair House.

## The Liberty Bell

The Liberty Bell was cast in England in 1752 for the Pennsylvania Statehouse (now Independence Hall). Damaged in transit, it was recast in Philadelphia in 1753. It is inscribed with the words, "Proclaim liberty throughout all the land unto all the inhabitants thereof" (Lev. 25:10). The bell was rung on July 8, 1776, for the first pub-

lic reading of the Declaration of Independence. Hidden in Allentown during the British occupation of Philadelphia, it was replaced in Independence Hall in 1778, where it remains today. The bell cracked on July 8, 1835, while tolling the death of Chief Justice John Marshall.



## THE UNITED STATES ARMED SERVICES

### U. S. MILITARY ACADEMY

*Source: U. S. Military Academy.*

Established in 1802 by an Act of Congress, the U. S. Military Academy is located on the west bank of the Hudson River some 50 miles north of New York City. Admission may be gained only by appointment to one of the 2,496 cadetships authorized by law. These cadetships are allocated among the following sources of nomination:

#### Noncompetitive:

Representatives (4 each) .....	1,740
Senators (4 each) .....	384
Other:	
Hawaii and Alaska .....	8
District of Columbia .....	6
Canal Zone Government ...	2
Puerto Rico .....	4
Vice Presidential .....	3
	23

#### Competitive:

Army and Air Force:	
Regular components .....	90
Reserve components .....	90
Presidential .....	89
Sons of deceased veterans .....	40
Honor military & honor naval schools .....	40
Total .....	2,496

Graduation of the senior class leaves about 750 vacant cadetships each year, and candidates may be nominated for these vacancies during the year preceding the admission date—the first Tuesday in July.

Candidates must be citizens of the U. S., between the ages of 17 and 22, unmarried, 5'6" to 6'6" tall and able to meet the mental, physical and physical aptitude requirements. Candidates with acceptable college records may qualify mentally by satisfactory performance on the College Entrance Examination Board's Scholastic Aptitude Test; all other candidates take the CEEB's Scholastic Aptitude Test and achievement tests in intermediate mathematics and English composition. Entrance requirements and procedures for appointment are described in the U. S. Military Academy Catalog, available without charge from The Registrar, U. S. Military Academy, West Point, N. Y.

Cadets receive their entire education at Government expense and are paid \$111.15 per month. From this sum, they pay for their meals, uniforms, textbooks, etc. Upon successful completion of the 4-year course, the graduate receives the degree of Bachelor of Science and is commissioned a second lieutenant in the regular Army or Air Force. He must serve at least 3 years. If he resigns then, he must serve an additional 3 years in the Reserves.

### U. S. NAVAL ACADEMY

*Source: U. S. Naval Academy.*

On October 10, 1845, the Naval School was established at Fort Severn, Annapolis, Maryland. Five years later it was renamed the United States Naval Academy, and the following year a regular four-year course was adopted. At present, the curriculum consists of courses in the following departments: executive; seamanship and navigation; ordnance and gunnery; marine engineering; aviation; electrical engineering; mathematics; English, history and government; foreign languages; hygiene; and physical education.

Candidates are selected as follows:

- 5 from the District of Columbia
- 40 sons of men and women killed in action or who have died, or may hereafter die of wounds or injuries, or disease contracted, in active service in World Wars I and II and other periods.
- 75 annually from among sons of officers and enlisted men in the regular Army, Navy, Marine Corps, Air Force and Coast Guard.
- 160 enlisted Navy and Marine personnel selected annually by competitive examination
- 160 annually chosen by the Secretary of the Navy from the Naval and Marine Corps Reserves
- 5 Puerto Ricans chosen by the Resident Commissioner of Puerto Rico
- 1 on the recommendation of the Governor of Puerto Rico
- 4 Filipinos designated by the President of the United States
- 1 from the Canal Zone
- 20 annually from schools designated by the Army and Navy as honor schools and from NROTC schools.
- 20 from the American republics and the Dominion of Canada
- Unlimited: Sons of persons who have been or shall hereafter be awarded the Congressional Medal of Honor.

Each Senator, Representative, delegate to Congress, and the Vice President may have not more than 5 Midshipmen at the Naval Academy. The Board of Commissioners selects the 5 from the District of Columbia. The President selects the 40 sons of deceased veterans of World Wars and the 75 sons of officers and enlisted men in the regular Army, Navy, Marine Corps, Air Force and Coast Guard. The President also appoints the sons of holders of the Medal of Honor.

Subject to the existence of vacancies and the availability of accommodations, the Secretary of the Navy may nominate for appointment a limited number of additional candidates. These must be recom-

mended by the Academic Board from among the fully qualified, regularly nominated alternate and competitive candidates of the same year who were unable to enter because of the appointment of men preceding them in nomination.

Candidates for admission must be between 17 and 22 years of age on July 1 of their entering year. They may qualify by taking entrance examinations, by presenting an acceptable secondary school certificate and taking special examinations in English and mathematics, or by completing a sufficient number of acceptable college courses. Candidates must meet physical requirements and be unmarried.

Midshipmen are paid \$1,333.80 a year. Graduates of the Academy are granted Bachelor of Science degrees and are commissioned as ensigns in the Navy or second lieutenants in the Marine Corps. In addition, a limited number of the members of graduating classes may be commissioned in the U. S. Air Force.

## U. S. COAST GUARD ACADEMY

Source: U. S. Coast Guard Academy.

The cadet system of the Coast Guard was established by law on July 31, 1876, when the "School of Instruction" for the Revenue Cutter Service, predecessor to the Coast Guard, was authorized.

The *J. C. Dobbin*, a converted schooner, served as the first schoolship, and was succeeded in 1878 by the bark *Chase*, a ship built for cadet training. First winter quarters were in a sail loft at New Bedford, Mass. The school was moved in 1900 to a two-story frame school at Curtis Bay, Md., to provide a more technical education; and in 1910 to Fort Trumbull, New London, Conn. In 1932 the Academy moved to its present site in the latter city.

The 4-year college-level curriculum leads to a Bachelor of Science degree in Engineering and to a commission of ensign in the U. S. Coast Guard.

Cadets receive appointment to the Academy through a nation-wide competitive examination, held annually in February. Candidates must be between 17 and 22 years of age, physically sound, unmarried and at least 5' 6" tall. They must agree to remain unmarried until graduation and to serve at least 4 years on active duty. Cadets receive \$1,333.80 per annum to cover their uniform and incidental expenses, and are furnished their rations and quarters. Applications for appointment may be made to the Commandant (PTP), U. S. Coast Guard, Washington 25, D. C.

## U. S. MERCHANT MARINE ACADEMY

Source: U. S. Merchant Marine Academy.

The U. S. Merchant Marine Cadet Corps was established Mar. 15, 1938, and its Academy is located on the south shore of

Long Island Sound at Kings Point, N. Y. The Academy has a complement of 800 cadet-midshipmen representing every U. S. state, D. C., Alaska, the Canal Zone, Hawaii, and Puerto Rico. In addition, it is authorized to receive each year, for the full period of training, not more than 12 candidates from Latin American republics.

Appointments to the Academy are governed by a state and territory quota system, based on population, and are made through competitive examinations. A candidate must be an unmarried citizen between 17 and 21, with a one-year age waiver granted to veterans. He must have 15 high-school credits, including 1 unit in algebra, 1 in plane geometry, 1 in physics, and 3 in English.

The course is 4 years, consisting of 1 year as Fourth Classman at the Academy, 1 year as Third Classman aboard a merchant ship, and 2 years as Second and First Classman at the Academy. Study includes marine engineering, navigation, electricity, ship construction, naval science and tactics, economics, business, languages, history, and other subjects.

On completion of their courses, cadet-midshipmen are examined for their original Merchant Marine license as deck or engineer officers in any ship in the U. S. Merchant Marine. They also receive Bachelor of Science degrees and commissions as officers in the U. S. Naval Reserve. Over 9,000 officers have been graduated.

## U. S. AIR FORCE ACADEMY

Source: U. S. Air Force Academy.

The bill establishing the Air Force Academy was signed by President Eisenhower on Apr. 1, 1954. The first class of 306 cadets was sworn in on July 11, 1955, at Lowry Air Force Base, Denver, Colo., the Academy's temporary location. Permanent headquarters, at Colorado Springs, Colo., are expected to be completed in 1958.

Eventually the Academy will have a complement of 2,496. Qualified sons of Medal of Honor winners will be admitted in addition to the number of vacancies.

Candidates must be citizens of the U. S., at least 17 but less than 22 on July 1 of the year for which they seek admission, unmarried, at least 5' 4" and not more than 6' 4" tall and able to meet the mental and physical requirements. A candidate is required to take the following examinations and tests: (1) The Air Force Medical Examination for Flying Training; (2) The Air Force Pilot Aptitude and Observer Aptitude Tests; (3) The College Entrance Examination Board Tests; and (4) a physical aptitude examination.

Cadets receive their entire education at Government expense and, in addition, are paid \$111.15 per month. From this sum, they pay for their uniforms, textbooks,

etc. Upon completion of the prescribed 4-year course of instruction, leading to a baccalaureate degree, a cadet who meets

the physical qualifications is appointed a second lieutenant in the regular U. S. Air Force.

## History of the Armed Services

*Source: Encyclopaedia Britannica.*

### U. S. ARMY

When Gen. Washington, on July 3, 1775, took command of the colonial militia (about 8,000 men) besieging Boston, the event marked the union of the forces of the 13 separate colonies under one head, and the U. S. Army was born. In Jan. 1776, the Continental Congress decided that these troops should be separate in organization from those of local communities and established them as the U. S. Regular Army. When these forces were disbanded after the war, only some 80 officers and men were retained to guard U. S. Army stores. From this humble beginning, in the ensuing years, the strength of the U. S. Army rose or fell according to national and international conditions.

### U. S. NAVY

In Sept. and Oct. 1775, Gen. Washington maintained 5 schooners and a sloop with officers and men from his army for the purpose of preying on inbound English supply vessels and thereby caused the birth of the U. S. Navy. In Dec. 1775, the Continental Congress expanded this by providing for construction of naval craft and the appointment of a marine committee (one member from each colony) which continued until 1794 when further ships and manpower were provided for by act of Congress. Upon completion of these ships in 1798, a Navy Department was established as the controlling agency, and the secretary given Cabinet rank.

### U. S. AIR FORCE

Until creation of the National Military Establishment in July 1947, which united the services under one command, U. S. military air forces operated under the several commands. In the Army, operations came under the Signal Corps until 1918, when the U. S. Air Service was established. In 1926, the U. S. Air Corps came into being and remained until 1942, when the Army Air Forces were formed, composed

of the U. S. Air Corps and its supporting services.

In the Navy, ship-based fighters and bombers are attached to the several fleets and are under the orders of the fleet commanders. Marine Corps aviation comes under control of the Navy.

In 1947, the U. S. Air Force was established as an autonomous arm of the Armed Forces. At that time, the name U. S. Air Corps and the names of the services within the Army Air Forces were abolished.

### U. S. COAST GUARD

This service was originally created by an act of Congress approved on Jan. 28, 1915, which combined the then Revenue Cutter Service and the Life-Saving Service. On July 1, 1939, the Lighthouse Service of the Department of Commerce was also consolidated into this unit. The Coast Guard, through its antecedents, is the oldest organization under the Federal government and, until the Navy Department was established in 1798, it served as the only U. S. armed force afloat. It operates under the Treasury Department in time of peace, serving in the capacity of life and property saving, prevention of smuggling, clearance of debris in harbors, maintaining an ice patrol in northern waters, flood service, etc. In time of war it is attached to the Navy Department, and in the recent conflict, it performed admirable service.

### U. S. MARINE CORPS

Founded in 1775 and observing its official birthday on Nov. 10, the U. S. Marine Corps was developed to be able to serve to advantage on land or sea.

It has been used successfully in every U. S. war beginning with the Revolution, when it consisted of 2 battalions. It reached its high in achievement in the recent war when its some 475,000 men and officers performed historic deeds in the Pacific Theater of Operations.

## Selective Service Classifications

**I-A:** Available for military service.

**I-A-O:** Conscientious objector available for noncombatant military service only.

**I-C:** Member of Armed Forces of U. S., Coast and Geodetic Survey or Public Health Service.

**I-D:** Member of reserve component or student taking military training.

**I-O:** Conscientious objector available for civilian work contributing to maintenance of national health, safety or interest.

**I-S:** Student deferred by statute.

**I-W:** Conscientious objector performing civilian work contributing to maintenance of national health, safety or interest.



- II-A:** Registrant deferred because of civilian occupation (except agriculture and activity in study).  
**II-C:** Registrant deferred because of agricultural occupation.  
**II-S:** Registrant deferred because of activity in study.  
**III-A:** Registrant with child or children; and registrant deferred by reason of extreme hardship and privation to dependents.

- IV-A:** Registrant who has completed service; sole surviving son.  
**IV-B:** Officials deferred by law.  
**IV-C:** Aliens.  
**IV-D:** Minister of religion or divinity student.  
**IV-F:** Physically, mentally or morally unfit.  
**V-A:** Registrant over age of liability for military service.

## Highest Ranking Officers in the Armed Forces

### ARMY

**Generals of the Army:** George C. Marshall; Douglas MacArthur; Omar N. Bradley.  
**Generals:** Maxwell D. Taylor; Henry I. Hodes; Lyman L. Lemnitzer; Willard G. Wyman; Williston B. Palmer; Isaac D. White.

### AIR FORCE

**Generals:** Nathan F. Twining; Thomas D. White; Lauris Norstad; Curtis E. LeMay; Otto P. Weyland; Earl Partridge; Edwin W. Rawlings; Laurence S. Kuter.

### NAVY

**Fleet Admirals:** William D. Leahy; Chester W. Nimitz.

**Admirals:** Arthur W. Radford; Arleigh A. Burke; Donald B. Duncan; Felix B. Stump; Jerauld Wright; Robert P. Briscoe; Walter F. Boone.

### MARINE CORPS

**General:** Randolph McC. Pate.  
**Lieutenant Generals:** Vernon E. Megee; Christian F. Schilt; Ray A. Robinson; Edwin A. Pollock; Merrill B. Twining.

### COAST GUARD

**Vice Admiral:** Alfred C. Richmond.  
**Rear Admirals:** James A. Hirschfield; H. C. Perkins; Joseph Greenspun; Halert C. Shephard; Kenneth K. Cowart; William W. Kenner; Joseph F. Van Ackeren.

## U. S. Military Actions Other Than Declared Wars

**HAWAII (1893):** U. S. Marines, ordered to land by U. S. Minister Stevens, aided the revolutionary Committee of Safety in overthrowing the native government. Stevens then proclaimed Hawaii a U. S. protectorate. Annexation, resisted by the Democratic regime in Washington, was not formally accomplished until 1898.

**CHINA (1900):** Boxers (a group of Chinese revolutionists) occupied Peking and laid siege to foreign legations. U. S. troops joined an international expedition which relieved the city.

**PANAMÁ (1903):** After Colombia had rejected a proposed agreement for relinquishing sovereignty over the Panama Canal Zone, revolution broke out, aided by promoters of the Panama Canal Co. Two U. S. warships were standing by to protect American privileges. The U. S. recognized the Republic of Panamá on Nov. 6.

**DOMINICAN REPUBLIC (1904):** When the Dominican Republic failed to meet debts owed to the U. S. and foreign creditors, Theodore Roosevelt declared the U. S. intention of exercising "international police power" in the Western Hemisphere whenever necessary. The U. S. accordingly administered customs and managed debt payments of the Dominican Republic from 1905-07.

**NICARAGUA (1911):** The possibility of foreign control over Nicaragua's canal route led to U. S. intervention and agreement. The U. S. landed Marines in Nicaragua (Aug. 14, 1912) to protect American interests there. A small detachment remained until 1933.

**MEXICO (1914):** Mexican Dictator Huerta, opposed by President Wilson, had the support of European governments. An incident involving unarmed U. S. sailors in Tampico led to the landing of U. S. forces on Mexican soil. Vera Cruz was bombarded by the Navy to prevent the landing of munitions from a German vessel. At the point of war, both powers agreed to mediation by Argentina, Brazil and Chile. Huerta abdicated, and Carranza succeeded to the presidency.

**HAITI (1915):** U. S. Marines imposed a military occupation. Haiti signed a treaty making it a virtual protectorate of the U. S. until troops were withdrawn in 1934.

**MEXICO (1916):** Raids by Pancho Villa cost American lives on both sides of the border. President Carranza consented to a punitive expedition lead by Gen. Pershing, but antagonism grew in Mexico. Wilson withdrew the U. S. force when war with Germany became imminent.

**DOMINICAN REPUBLIC (1916):** Renewed intervention in the Dominican Republic with internal administration by U. S. naval officers lasted until 1924.

# U. S. Armed Forces Monthly Pay Rates for Officers

Source: Department of Defense, Public Information Office.

Army, Air Force and Marine Corps	Rank	Pay grade	Monthly pay	Monthly allowances for quarters	
				With dependents	With no dependents
General of the Army	Fleet Admiral	O-8	\$963.30	\$171.00	\$136.80
General	Admiral	O-8	963.30	171.00	136.80
Lieutenant General	Vice Admiral	O-8	963.30	171.00	136.80
Major General	Rear Admiral (upper half)	O-8	963.30	171.00	136.80
Brigadier General	Rear Admiral (lower half) and Commodore	O-7	800.28	171.00	136.80
Colonel	Captain	O-6	592.80	136.80	119.70
Lieutenant Colonel	Commander	O-5	474.24	136.80	102.60
Major	Lieutenant Commander	O-4	400.14	119.70	94.20
Captain	Lieutenant	O-3	326.04	102.60	85.50
First Lieutenant	Lieutenant (junior grade)	O-2	259.36	94.20	77.10
Second Lieutenant	Ensign	O-1	222.30	85.50	68.40
Chief Warrant Officer	Chief Warrant Officer	W-4	332.90	119.70	94.20
Same	Same	W-3	302.64	102.60	85.50
Chief Warrant Officer	Same	W-2	264.82	94.20	77.10
Warrant Officer (junior grade)	Warrant Officer	W-1	219.42	85.50	68.40

## Special Pay for Longevity

(Amounts listed below are monthly increases in the basic pay for longevity of service)

O-8—\$58.50 after 3 years; \$54.60 after 30 years.	O-1—\$14.82 after 2 years; \$59.28 after 3; \$15.60 after 6, 8, 10, 12 and 14 years.
O-7—\$49.92 after 3 years; \$50.60 after 26; \$62.40 after 30.	W-4—\$22.00 after 2 years; \$15.60 after 6, 8 and 10; \$19.50 after 12; \$31.20 after 14; \$15.60 after 16, 18, 22, 26 and 30 years.
O-6—\$38.00 after 3 years; \$23.40 after 16; \$62.40 after 18; \$31.20 after 22, 26 and 30 years.	W-3—\$21.06 after 2 years; \$7.80 after 6, 8 and 10; \$11.70 after 12; \$15.60 after 14; \$7.80 after 16; \$23.40 after 18; \$22.40 after 22; \$15.60 after 26 and 30 years.
O-5—\$32.76 after 3 years; \$23.40 after 12; \$31.20 after 14; \$16.60 after 16; \$31.20 after 18, 22 and 26 years.	W-2—\$15.98 after 2 years; \$7.80 after 6; \$15.60 after 8, 10, and 12; \$14.60 after 14; \$7.80 after 16; \$15.60 after 18, 22, 26 and 30 years.
O-4—\$28.86 after 3 years; \$23.40 after 8; \$31.20 after 10; \$15.60 after 12, 14 and 16; \$31.20 after 18; \$15.60 after 22 and 26 years.	W-1—\$31.78 after 2 years; \$15.60 after 6; \$19.50 after 8; \$7.80 after 10; \$11.70 after 12; \$7.80 after 14 and 16; \$15.60 after 18, 22 and 26 years.
O-3—\$24.96 after 3 years; \$23.40 after 4; \$31.20 after 6; \$15.60 after 8, 10, 12, 14, 16, 18 and 22 years.	
O-2—\$14.82 after 2 years; \$61.22 after 3; \$15.60 after 6, 8, 10, 12 and 14 years.	

## Insignia and Ranks of the Armed Forces

Army, Air Force and Marines		Navy and Coast Guard		
Insignia	Rank	Insignia	Rank	Stripes <sup>1</sup>
Five stars	General of the Army, Air Force	Five stars	Fleet Admiral	1—4—0
Four stars	General	Four stars	Admiral	1—3—0
Three stars	Lieutenant General	Three stars	Vice Admiral	1—2—0
Two stars	Major General	Two stars	Rear Admiral	1—1—0
One star	Brigadier General	One star	Commodore	1—0—0 <sup>2</sup>
Silver eagle	Colonel	Silver eagle	Captain	0—4—0
Silver maple leaf	Lieutenant Colonel	Silver maple leaf	Commander	0—3—0
Gold maple leaf	Major	Gold maple leaf	Lt. Commander	0—2—1
Two silver bars	Captain	Two silver bars	Lieutenant	0—2—0
One silver bar	First Lieutenant	One silver bar	Lieutenant (jg)	0—1—1
One gold bar	Second Lieutenant	One gold bar	Ensign	0—1—0
Gold bar with rounded ends, brown-enamel top, longitudinal center of gold (3/4" wide x 1 1/2" long)	Chief Warrant Officer, Commissioned Warrant Officer (Marines)	Warrant specialty in silver	Commissioned Warrant Officer	0—1—0 <sup>3</sup>
Same as Chief Warrant Officer but with latitudinal center of gold	Warrant Officer (jg)	Warrant specialty in gold	Warrant Officer	0—0—1 <sup>3</sup>

<sup>1</sup> Of gold embroidery. First figure is number of 2-in. stripes; second is number of 1/2-in. stripes; third is number of 1/4-in. stripes. <sup>2</sup> Wartime only. <sup>3</sup> Broken at 2-in. intervals with 1/2 in. of blue.

# U. S. Armed Forces Monthly Pay Rates for Enlisted Personnel

Source: Department of Defense, Public Information Office.

Army rank	Air Force rank	Marine rank	Navy rank	Pay grade	Monthly pay
Master Sergeant	Master Sergeant	Master Sergeant	Chief Petty Officer	E-7	\$206.39
Sergeant 1st Class	Technical Sergeant	Technical Sergeant	Petty Officer 1st Class	E-6	175.81
Sergeant	Staff Sergeant	Staff Sergeant	Petty Officer 2nd Class	E-5	145.24
Corporal	Airman 1st Class	Sergeant	Petty Officer 3rd Class	E-4	122.30
Private 1st Class	Airman 2nd Class	Marine Corporal	Navy Seaman	E-3	99.37
Private of the Army	Airman 3rd Class	Pvt. 1st Class Marine	Seaman Apprentice	E-2	85.80
Army Recruit*	Airman, Basic*	Private*	Seaman Recruit*	E-1	83.20
Army Recruit†	Airman, Basic†	Private†	Seaman Recruit†	E-1	78.00

\* With over 4 months' service. † With less than 4 months' service.

BASIC MONTHLY ALLOWANCE FOR QUARTERS: No dependents, \$51.30 for all pay grades; 1 dependent, \$51.30 for pay grades E-1 through E-3, \$77.10 for pay grades E-4 through E-7; 2 dependents, \$77.10 for all pay grades; over 2 dependents, \$96.90 for all pay grades.

## Special Pay for Longevity

(Amounts listed below are monthly increases in the basic pay for longevity of service)

E-7—\$15.91 after 2 years; \$7.80 after 4 and 6; \$15.60 after 8; \$7.80 after 10; \$11.70 after 12; \$7.80 after 14 and 16; \$15.60 after 18, 22 and 26 years.	E-4—\$18.10 after 2 years; \$19.50 after 4; \$7.80 after 6; \$11.70 after 8; \$7.80 after 10, 12, 14, 16 and 18 years.
E-6—\$11.91 after 2 years; \$7.80 after 4; \$19.50 after 6; \$7.80 after 8; \$11.70 after 10; \$7.80 after 12, 14 and 16; \$15.60 after 18 and 22 years.	E-3—\$17.63 after 2 years; \$15.60 after 4; \$7.80 after 6, 8 and 10; \$3.90 after 12 and 14 years.
E-5—\$18.56 after 2 years; \$19.50 after 4; \$7.80 after 6; \$11.70 after 8; \$7.80 after 10, 12, 14, 16 and 18; \$15.70 after 22 years.	E-2—\$15.60 after 2 years; \$7.80 after 4, 6, 8 and 10 years.
	E-1—\$15.60 after 2 years; \$7.80 after 4 years.*

\* For first 4 months service, pay is based at \$78.00 a month, after that it is \$83.20.

## Hazard Pay Rates

Members of the uniformed services are entitled to receive special pay (see p. 346) for the performance of certain duties required by competent orders.

Hazardous duty includes:

1. Frequent and regular participation in aerial flights not as a crew member.
2. Frequent and regular participation in glider flights.

3. Parachute jumping as part of duty.

4. Demolition of explosives as a primary duty, including training for such duty.

5. Duty at a submarine escape training tank when such duty involves participation in training.

6. Duty at Navy Deep Sea Diving School or Navy experimental diving unit when it involves participation in training.

### Medical Officers

The monthly rate is \$100 for pay grades O-2 through O-8.

### Diving as in Salvage and Repair

The monthly rate is not less than \$5 or more than \$30, plus \$5 for each diving hour spent in actual salvage or repair operations. This pay applies to pay grades E-1 through E-7 only.

### Sea and Foreign Duty

Pay grade	Monthly rate	Pay grade	Monthly rate
E-7.....	\$23.00	E-3.....	\$9.00
E-6.....	20.00	E-2.....	8.00
E-5.....	16.00	E-1.....	8.00
E-4.....	13.00		

### Korean Combat Pay

The monthly rate is \$45 for all pay grades.

Service in Korea does not necessarily entitle a service member to combat pay. Generally, to be entitled to combat pay during a month, he must have been subjected to hostile fire for not less than 6 days during the month while serving with a combat unit of regimental size or smaller, or in a vessel or aircraft. However, if the member received incentive or special pay for aviation, submarine, parachute, medical or dental duty, etc., during a month, he is not entitled to combat pay for that month.



## Hazard Pay Rates

(Include Flying and Submarine Pay)

Pay grade	Under 2 yrs.	Over 2 yrs.	Over 3 yrs.	Over 4 yrs.	Over 6 yrs.	Over 8 yrs.	Over 10 yrs.
O-8.....	\$155.00	\$155.00	\$165.00	\$165.00	\$165.00	\$165.00	\$165.00
O-7.....	150.00	150.00	160.00	160.00	160.00	160.00	160.00
O-6.....	200.00	200.00	215.00	215.00	215.00	215.00	215.00
O-5.....	190.00	190.00	205.00	205.00	205.00	205.00	205.00
O-4.....	170.00	170.00	185.00	185.00	185.00	195.00	210.00
O-3.....	145.00	145.00	155.00	165.00	180.00	185.00	190.00
O-2.....	115.00	125.00	150.00	150.00	160.00	165.00	170.00
O-1.....	100.00	105.00	135.00	135.00	140.00	145.00	155.00
W-4.....	115.00	115.00	115.00	115.00	120.00	125.00	135.00
W-3.....	110.00	115.00	115.00	115.00	120.00	120.00	125.00
W-2.....	105.00	110.00	110.00	110.00	115.00	120.00	125.00
W-1.....	100.00	105.00	105.00	105.00	110.00	120.00	125.00
E-7.....	80.00	85.00	85.00	85.00	90.00	95.00	100.00
E-6.....	70.00	75.00	75.00	80.00	85.00	90.00	95.00
E-5.....	60.00	70.00	70.00	80.00	80.00	85.00	90.00
E-4.....	55.00	65.00	65.00	70.00	75.00	80.00	80.00
E-3.....	55.00	60.00	60.00	60.00	60.00	60.00	60.00
E-2.....	50.00	60.00	60.00	60.00	60.00	60.00	60.00
E-1.....	50.00	55.00	55.00	55.00	55.00	55.00	55.00
Pay grade	Over 12 yrs.	Over 14 yrs.	Over 16 yrs.	Over 18 yrs.	Over 22 yrs.	Over 26 yrs.	Over 30 yrs.
O-8.....	\$165.00	\$165.00	\$165.00	\$165.00	\$165.00	\$165.00	\$165.00
O-7.....	160.00	160.00	160.00	160.00	160.00	160.00	160.00
O-6.....	215.00	215.00	220.00	245.00	245.00	245.00	245.00
O-5.....	210.00	225.00	230.00	245.00	245.00	245.00	245.00
O-4.....	215.00	220.00	230.00	240.00	240.00	240.00	240.00
O-3.....	200.00	205.00	205.00	205.00	205.00	205.00	205.00
O-2.....	180.00	185.00	185.00	185.00	185.00	185.00	185.00
O-1.....	160.00	170.00	170.00	170.00	170.00	170.00	170.00
W-4.....	145.00	155.00	160.00	165.00	165.00	165.00	165.00
W-3.....	135.00	140.00	140.00	140.00	140.00	140.00	140.00
W-2.....	130.00	135.00	135.00	135.00	135.00	135.00	135.00
W-1.....	130.00	130.00	130.00	130.00	130.00	130.00	130.00
E-7.....	105.00	105.00	105.00	105.00	105.00	105.00	105.00
E-6.....	95.00	100.00	100.00	100.00	100.00	100.00	100.00
E-5.....	95.00	95.00	95.00	95.00	95.00	95.00	95.00
E-4.....	80.00	80.00	80.00	80.00	80.00	80.00	80.00
E-3.....	60.00	60.00	60.00	60.00	60.00	60.00	60.00
E-2.....	60.00	60.00	60.00	60.00	60.00	60.00	60.00
E-1.....	55.00	55.00	55.00	55.00	55.00	55.00	55.00

## Largest Armies of the World

*Source: Encyclopaedia Britannica*

Country	Army personnel <sup>1</sup>	Year	Country	Army personnel <sup>1</sup>	Year
Belgium.....	150,000	1951	Iran.....	130,000	(?)
Bulgaria.....	200,000	1954	Netherlands.....	175,000	1949
China (Communist).....	4,000,000	1955	Pakistan.....	250,000	(?)
China (Nationalist).....	600,000	1956	Poland.....	450,000	1956
Czechoslovakia.....	300,000	(?)	Rumania.....	450,000	1954
Egypt.....	160,000	(?)	Spain.....	425,000	(?)
France.....	608,000	1953	Turkey.....	375,000	1954
Greece.....	132,000	1948	U.S.S.R.....	3,000,000	(?)
Hungary.....	280,000	1956	United Kingdom.....	440,000	1954
India.....	300,000	1950	United States.....	1,109,296	1955
Indonesia.....	300,000	(?)	Yugoslavia.....	600,000	1954

<sup>1</sup> Estimated, unless otherwise indicated. <sup>2</sup> Not specified.

**ALLOWANCES FOR SUBSISTENCE**

Officers receive \$47.88 per month. Enlisted personnel receive allowances for subsistence under the following provisions: (1) when rations in kind are not available, \$2.57 per day; (2) when permission to mess separately is granted, \$1.20 per day; (3) when assigned to duty under emergency conditions where no government messing facilities are available, up to and not to exceed \$3.42 per day.

**U. S. Navy Combatant Vessels**

Type	Number
Carriers (CVA).....	15
Light carriers and carrier escorts.....	13
Battleships.....	3
Cruisers.....	20
Destroyers and destroyer escorts.....	249
Submarines.....	110
Mine and patrol ships and auxiliaries.....	591
Total.....	1,001*

\* In addition, there are 24 commissioned vessels in Military Sea Transportation Service.

**Casualties of U. S. Major Wars**

Source: Department of Defense.

War	Branch of service	Numbers engaged	Battle deaths	Other deaths	Total deaths	Wounds not mortal	Total casualties <sup>1</sup>
Revolutionary War 1775 to 1783	Army	.....	4,044	.....	.....	6,004	.....
	Navy	.....	342	.....	.....	114	.....
	Marines	.....	49	.....	.....	70	.....
	Total	.....	4,435	.....	.....	6,188	.....
War of 1812 1812 to 1815	Army	.....	1,950	.....	.....	4,000	.....
	Navy	.....	265	.....	.....	439	.....
	Marines	.....	45	.....	.....	66	.....
	Total	286,730	2,260	.....	.....	4,505	.....
Mexican War 1846 to 1848	Army	.....	1,721	11,550	13,271	4,102	17,373
	Navy	.....	1	.....	.....	3	.....
	Marines	.....	11	.....	.....	47	.....
	Total	78,718	1,733	.....	.....	4,152	.....
Civil War <sup>2</sup> 1861 to 1865	Army	2,128,948	138,154	221,374	359,528	280,040	639,568
	Navy	.....	2,112	2,411	4,523	1,710	6,233
	Marines	84,415	148	312	460	131	591
	Total	2,213,363	140,414	224,097	364,511	281,881	646,392
Spanish-American War 1898	Army	280,564	369	2,061	2,430	1,594	4,024
	Navy	22,875	10	0	10	47	57
	Marines	3,321	6	0	6	21	27
	Total	306,760	385	2,061	2,446	1,662	4,108
World War I 1917 to 1918	Army	4,057,101	50,510	55,868	106,378	193,663	300,041
	Navy	599,051	436	6,898	7,334	819	8,153
	Marines	78,839	2,461	390	2,851	9,520	12,371
	Total	4,734,991	53,407	63,156	116,563	204,002	320,565
World War II 1941 to 1945	Army <sup>3</sup>	11,260,000	234,874	83,400	318,274	565,861	884,135
	Navy	4,183,466	39,379	25,664	65,043	37,778	102,821
	Marines	669,100	19,733	4,778	24,511	67,204	91,715
	Total	16,112,566	293,986	113,842	407,828	670,843	1,078,671

<sup>1</sup> Excludes captured or interned and missing in action who were subsequently returned to military control. <sup>2</sup> Union forces only. Totals should probably be somewhat larger as data on disposition of prisoners are far from complete. <sup>3</sup> Army data include Air Force. NOTE: All data are subject to revision. For wars before World War I, information represents best data from available records. However, due to incomplete records and possible differences in usage of terminology, reporting systems, etc., figures should be considered estimates. Leaders (.....) indicate that information is not available.

**U. S. Casualties in Korean War, as of May 1956**

Numbers engaged: 5,720,000 (Army, 2,834,000; Navy, 1,177,000; Marine Corps, 424,000; Air Force, 1,285,000). Battle deaths: 33,629 (Army, 27,704; Navy, 458; Marine Corps, 4,267; Air Force, 1,200). Other deaths: 20,617 (Army, 9,429; Navy, 4,043; Marine Corps, 1,261; Air Force, 5,884). Wounded in action: 103,284 (Army, 77,596; Navy, 1,576; Marine Corps, 23,744; Air Force, 368). Current missing: Navy, 9.

## Casualties in World War II

(U. S. figures are to be found on p. 362)

Country	Men in war	Battle deaths	Other deaths	Wounded	Still missing
Australia.....	1,000,000	26,951	6,875	180,864	( <sup>1</sup> )
Austria.....	800,000	280,000	24,000	350,117	122,000
Belgium.....		8,460	40,564 <sup>2</sup>		
Brazil <sup>3</sup> .....	40,334	943	32	4,222	
Bulgaria.....		30,000 <sup>4</sup>			
Canada.....	1,031,820	32,408	9,635	53,145	0
China <sup>5</sup> .....		1,319,958		1,761,335	130,126
Czechoslovakia.....		6,683 <sup>6</sup>		8,017	
Denmark.....		6,300 <sup>7</sup>			
Finland.....	500,000	76,893	1,961		6,000
France.....		201,568	261,577	400,000	140,000
Germany.....	20,000,000	3,250,000 <sup>8</sup>	3,350,000	7,250,000	1,300,000
Greece.....		17,024	391,000 <sup>9</sup>	47,290	
Hungary.....		147,435		89,313	125,556
India.....	2,000,000	24,338 <sup>6</sup>		64,354	
Italy.....	3,100,000	135,723	174,517		144,505
Japan.....	9,700,000	1,270,000	620,000	140,000	85,000
Netherlands.....		280,000 <sup>6</sup>			
New Zealand.....	194,000	11,625 <sup>6</sup>		17,000	46 <sup>6</sup>
Norway.....	75,000	2,000	8,262		0
Poland.....		664,000	5,380,000	1,600,000	
Rumania.....	650,000 <sup>7</sup>	350,000 <sup>8</sup>			180,000
South Africa, Union of.....	302,128	6,840	4,005	14,363	1,841
U.S.S.R.....		6,115,000 <sup>8</sup>		14,012,000	
United Kingdom.....	5,896,000	357,116 <sup>8</sup>		369,267	46,079
Yugoslavia.....	3,741,000	305,000	1,401,000	425,000	

<sup>1</sup> Up-to-date figures not available; 2,475 in 1946. <sup>2</sup> Also 20,000 Jews and non-Belgians living in Belgium. <sup>3</sup> Deaths from all causes. <sup>4</sup> Figures cover period July 7, 1937-Sept. 2, 1945, and concern only Chinese regular troops. They do not include casualties suffered by guerrillas and local military corps. <sup>5</sup> Includes 261,000 dead of starvation. <sup>6</sup> As of Dec. 31, 1946. <sup>7</sup> Against Soviet Russia; 385,847 against Nazi Germany. <sup>8</sup> Against Soviet Russia; 169,822 against Nazi Germany. Figures include all deaths, wounded, and missing. <sup>9</sup> Army and Navy figures.

## U. S. Armed Forces Personnel

Source: U. S. Department of Defense.

Year	Army*	Air Force*	Navy	Marines	Coast Guard†	Men†	Women
1934.....	137,584		92,312	16,361	9,985	245,299	958
1935.....	138,569		95,053	17,260	10,303	249,947	935
1936.....	166,724		106,292	17,248	9,545	289,311	953
1937.....	178,733		113,617	18,223	10,066	309,556	1,017
1938.....	184,126		119,088	18,356	9,968	320,472	1,098
1939.....	188,565		125,202	19,432	10,064	332,089	1,110
1940.....	267,767		160,997	28,277	13,621	455,660	1,381
1941.....	1,460,998		284,427	54,359	19,036	1,793,680	6,104
1942.....	3,074,184		640,570	142,613	58,998	3,902,112	14,253
1943.....	6,993,102		1,741,750	308,523	154,976	9,068,994	129,357
1944.....	7,992,868		2,981,365	475,604	169,264	11,400,450	218,651
1945.....	8,266,373		3,380,817	474,680	171,518	12,018,974	274,414
1946.....	1,889,690		983,398	155,592	29,736	2,970,688	57,992
1947.....	989,664		486,245	92,222	18,972	1,548,472	19,659
1948.....	552,239	387,730	405,789	83,609	19,929	1,415,216	14,151
1949.....	658,694	419,347	448,500	86,000	23,326	1,594,481	18,060
1950.....	593,167	411,277	381,538	74,279	23,190	1,438,206	22,055
1951.....	1,552,000	850,000	740,000	204,000	29,000	3,420,000	40,000
1952.....	1,653,000	939,000	801,000	237,000	34,000	3,624,703	45,964
1953.....	1,533,815	977,593	794,440	249,219	34,148	3,543,730	45,512
1954.....	1,404,598	947,918	725,720	214,797	28,444	3,291,948	38,622
1955.....	1,109,296	959,946	660,695	205,170	28,500	2,935,107	35,191

\* Prior to July 26, 1947, when the National Military Establishment was established, the Air Force was a part of the Army. † Not including the men in the Coast Guard during peacetime. ‡ From 1942 to and including 1945, the Coast Guard was part of the Navy; in peacetime it is attached to the Treasury Department.



## Casualties in World War I

Source: Department of Defense.

(U. S. figures are to be found on p. 362)

	Total mobilized forces	Killed or died <sup>1</sup>	Wounded	Prisoners or missing	Total casualties
Austria-Hungary.....	7,800,000	1,200,000	3,620,000	2,200,000	7,020,000
Belgium.....	267,000	13,716	44,686	34,659	93,061
British Empire <sup>2</sup> .....	8,904,467	908,371	2,090,212	191,652	3,190,235
Bulgaria.....	1,200,000	87,500	152,390	27,029	266,919
France <sup>2</sup> .....	8,410,000	1,357,800	4,266,000	537,000	6,160,800
Germany.....	11,000,000	1,773,700	4,216,058	1,152,800	7,142,558
Greece.....	230,000	5,000	21,000	1,000	27,000
Italy.....	5,615,000	650,000	947,000	600,000	2,197,000
Japan.....	800,000	300	907	3	1,210
Montenegro.....	50,000	3,000	10,000	7,000	20,000
Portugal.....	100,000	7,222	13,751	12,318	33,291
Rumania.....	750,000	335,706	120,000	80,000	535,706
Russia.....	12,000,000	1,700,000	4,950,000	2,500,000	9,150,000
Serbia.....	707,343	45,000	133,148	152,958	331,106
Turkey.....	2,850,000	325,000	400,000	250,000	975,000

<sup>1</sup> Includes deaths from all causes. <sup>2</sup> Official figures.

## Veterans' Benefits

Veterans of World War I were the first in our history to receive compensation for injuries, allotments for the support of dependents, life insurance, medical care and vocational rehabilitation. Beginning with 1940, these benefits were slowly broadened.

The following benefits available to veterans of World War II and the Korean War have specific time limitations and, in most cases, are applicable only to those whose discharge was not under dishonorable conditions.

**Education and Training:** *Veterans of the Korean War:* For a maximum period of 1½ times the duration of active service, not exceeding 36 months, the VA pays sums varying from \$110 to \$160 per month toward subsistence, tuition, supplies, etc.

**Re-employment:** The veteran is to be reinstated in the same position or an equivalent one unless, in the case of a private employer, changed circumstances make this impossible.

**Unemployment allowances:** Korea veterans out of work are entitled to unemployment allowances of \$26 a week for up to 26 weeks. Application should be made to the local state employment office.

**Loans:** Only loans for the purchase or construction of a home, to buy a farm and farm equipment or business property and equipment, are permissible. The VA will guarantee the lender against loss up to 60% of a home loan with a maximum of \$7,500. On other loans, the guarantee is up to 50% with a maximum of \$4,000 involv-

ing real estate and \$2,000 on non-real estate loans. The interest rate in all cases must not exceed 4½ % per year.

The following benefits are also available to those having some service-connected illness or disability:

**Disability Compensation:** The VA pays from \$17 to \$181 per month with additional sums for specific conditions up to \$420 per month, plus allowances for wife, children or dependent parents.

**Vocational rehabilitation:** Necessary training expenses, special equipment, etc., toward a definite job objective are paid for, plus a monthly allowance varying from \$65 to \$120 in addition to compensation.

**Medical and dental care:** This includes complete care in VA or certain other Federal hospitals. It also covers treatment (not requiring hospitalization) at a VA field station or by an approved private physician or dentist. Medicine, instruments, appliances, mechanical equipment, etc., are supplied. Full domiciliary care is also provided where necessary.

**Death benefits:** Up to \$10,000 of GI Insurance may be paid to the beneficiaries of deceased veterans. Compensation to a widow is \$75 per month, with an allowance for each child.

**NOTE:** Since our space has permitted only a general statement of the principal benefits available to veterans, the reader is referred to his local office of the Veterans' Administration (VA) for detailed information.

# U. S. Postal Regulations

Source: U. S. Post Office.

## FIRST CLASS:

Letters and written and sealed matter: 3¢ for each oz., except that drop letters are subject to 2¢ for each oz. when deposited for local delivery at offices not having letter-carrier service, provided they are not collected or delivered by rural or star-route carriers.

Government postal cards: single, 2¢; double, 4¢.

Private mailing or post cards: 2¢.

Limit of weight when mailed from one first-class post office to another: 40 lb. in local, first and second zones, 20 lb. in third to eighth zones.

Limit of weight when mailed to or from second-, third- and fourth-class post offices: 70 lb.

## AIRMAIL (LIMIT 8 OZ.):

6¢ for each oz. or fraction thereof within the continental U. S., within any Territory or possession of the U. S., or between any of the foregoing. This includes airmail to or from Alaska, Hawaii, Puerto Rico, Virgin Islands of the U. S., Canton Island, Canal Zone, Guam and any other place where the U. S. mail service is in operation.

Post cards: 4¢.

## AIR PARCEL POST (OVER 8 OZ. TO 70 LB.):

The zone rates below shall apply to mailable matter of any class carried by air. Such matter shall not exceed 100 in. in length and girth combined, including written and other matter of the first class, whether sealed or unsealed. Fractions of a lb. are charged as a full lb.

Parcels weighing less than 10 lb. and measuring more than 84 in., but not more than 100 in. in length and girth combined, shall be subject to the 10-lb. rate.

### Air Parcel-Post Zone Rates

Zone and (miles)	First lb.	Addl. lbs.
First, Second & Third (to 300) .	60¢	48¢
Fourth (300-600) . . . . .	65¢	50¢
Fifth (600-1,000) . . . . .	70¢	56¢
Sixth (1,000-1,400) . . . . .	75¢	64¢
Seventh (1,400-1,800) . . . . .	75¢	72¢
Eighth (over 1,800) . . . . .	80¢	80¢

The eighth-zone rate shall be charged on air parcel post between the U. S. or its Territories and possessions and overseas A.P.O.'s and Fleet post offices, as well as naval vessels and commands afloat addressed in care of Fleet post offices at New York or San Francisco.

Air parcels mailed at New York, N. Y., and addressed to Puerto Rico and the Virgin Is. are subject to the seventh-zone rate.

## SECOND CLASS (NO WEIGHT LIMIT):

Newspapers, magazines and other periodicals containing notice of second-class entry.

For rates for publications mailed by the publishers or registered news agents, consult local postmaster.

Transient rate for matter mailed by others than the publishers or registered news agents: 2¢ for the first 2 oz., 1¢ for each additional 2 oz. However, if the fourth-class rate is cheaper, it shall apply.

## THIRD CLASS (LIMIT 8 OZ.):

Merchandise, books, printed matter and all other mailable matter not in first or second class.

Regular rate: 2¢ for the first 2 oz., 1¢ for each additional oz. Books and catalogs of 24 pages or more, seeds, cuttings, bulbs, etc.: 2¢ for the first 2 oz., 1½¢ for each additional 2 oz.

Bulk rate: for \$10 per year or fraction thereof, separately addressed identical pieces of third-class matter in quantities of not less than 20 lb. or of not less than 200 pieces are subject to the lb. rates of postage applicable to the entire bulk mailed at one time.

The bulk rate for miscellaneous printed matter, etc. is 14¢ for each lb., with a minimum charge of 1½¢ per piece. For books and catalogs of 24 pages or more, seeds, etc., the rate is 10¢ for each lb., with a minimum charge of 1½¢ per piece.

Pieces of such size or form as to prevent ready facing and tying in bundles and requiring individual distributing throughout are subject to a minimum charge of 3¢ each.

## FOURTH CLASS (PARCEL POST) (OVER 8 OZ.):

Merchandise, books, printed matter and all other mailable matter not in first or second class.

The zone rates below shall apply to fourth-class matter, except catalogs, books, library books, publications or records for the blind, and certain controlled circulation publications.

Limit of size\*: 72 in. in length and girth combined.

Limit of weight\*: over 8 oz. to 40 lb. in local, first and second zones, over 8 oz. to 20 lb. in third to eighth zones.

Note: The following five items have a size limit of 100 in. in length and girth

\* When mailed from one first-class post office to another.

combined, a weight limit of over 8 oz. to 70 lb.: (1) parcels sent to or from rural or star routes; (2) parcels sent to or from second-, third-, and fourth-class post offices; (3) parcels containing baby fowl, live plants, trees, shrubs, or agricultural commodities (not including manufactured products thereof); (4) parcels containing books; (5) parcels mailed between the U. S. and any Army or Fleet post office or between the U. S. and any Territory or possession of the U. S.

#### Fourth-Class Zone Rates

Zone and (miles)	First lb.	Addl. lbs.
Local	\$.18	\$.0145
First & Second (to 150)*	.23	.0395
Third (150-300)	.23	.0515
Fourth (300-600)	.24	.0690
Fifth (600-1,000)	.26	.0925
Sixth (1,000-1,400)	.28	.1195
Seventh (1,400-1,800)	.30	.1520
Eighth (over 1,800)	.32	.1805

\* In the 1st or 2nd zone, where the distance by the shortest practicable mail route is 300 mi. or more, the rate shall be the same as for the 3rd zone.

The zone rates below shall apply to individually addressed catalogs and similar printed advertising matter in bound form weighing more than 8 oz. but not exceeding 10 lb.

#### Catalog Zone Rates\*

Zone and (miles)	First lb.	Addl. half-lbs.
Local	\$.12	\$.0075
First & Second (to 150)†	.13	.0150
Third (150-300)	.14	.0200
Fourth (300-600)	.15	.0250
Fifth (600-1,000)	.17	.0325
Sixth (1,000-1,400)	.18	.0400
Seventh (1,400-1,800)	.19	.0500
Eighth (over 1,800)	.20	.0600

\* Fractions of one-half cent or less are counted as one-half cent; fractions of a cent exceeding one-half cent are counted as one cent in the total amount.

† In the 1st or 2nd zone, where the distance by the shortest practicable mail route is 300 mi. or more, the rate shall be the same as for the 3rd zone.

#### BOOKS (LIMIT 70 LB.):

Books (containing no advertising matter other than incidental announcements of books) for all zones: 8¢ first lb., 4¢ each additional lb.

#### LIBRARY BOOKS (LIMIT 70 LB.):

Books sent by authorized libraries to readers and when returned by such readers, for delivery within the first three zones or the state in which mailed: 4¢ first lb., 1¢ each additional lb.

#### SPECIAL DELIVERY AND SPECIAL HANDLING:

The prepayment of the special-delivery fee entitles mail to the most expeditious handling and special delivery.

Prepayment of the special-handling fee entitles fourth-class matter to the most

expeditious handling, transportation and delivery possible, but not special delivery.

#### Special Delivery and Special Handling

Weight	Special delivery		Special handling (4th class only)
	First class	2nd, 3rd, 4th class	
Up to 2 lb. ....	20¢	35¢	15¢
2 to 10 lb. ....	35¢	45¢	20¢
Over 10 lb. ....	50¢	60¢	25¢

#### MONEY ORDERS:

Money orders for amounts from 1¢ to \$100 are issued upon written application\* made by the remitter or his agent showing the amount of the order and the names and addresses of payee and remitter.

Amount of order	Fee
\$ .01 to \$ 5.00	.10¢
5.01 to 10.00	.15¢
10.01 to 50.00	.25¢
50.01 to 100.00	.35¢

\* As of Oct. 1, 1955, 1st- and 2nd-class post offices will issue money orders without written application.

#### REGISTERED MAIL:

Fees for domestic registered mail (first-, second- and third-class matter, and sealed fourth-class matter on which postage at the first-class rate has been paid):

Indemnity limit <sup>1</sup>	Fee
\$ .01 to \$ 5.00	.40
5.01 to 25.00	.55
25.01 to 50.00	.65
50.01 to 75.00	.75
75.01 to 100.00	.85
100.01 to 200.00	.95
200.01 to 300.00	1.05
300.01 to 400.00	1.15
400.01 to 500.00	1.25
500.01 to 600.00	1.35
600.01 to 700.00	1.45
700.01 to 800.00	1.55
800.01 to 900.00	1.65
900.01 to 1000.00	1.75

When the declared value exceeds the maximum indemnity covered by the registry fee by \$1,000 or more, there shall be charged additional fees (surcharges). The additional fees (surcharges) for each \$1,000 or part of \$1,000 on articles destined to points within the several zones applicable to fourth-class matter shall be as follows:

Zone	Fee
For local delivery or for delivery within 1st zone	12¢
For delivery within 2nd zone	14¢
For delivery within 3rd zone	16¢
For delivery within 4th zone	17¢
For delivery within 5th or 6th zones	18¢
For delivery within 7th or 8th zones	19¢



Restricted delivery, 20¢. Return receipts: showing to whom and when delivered, 7¢; to whom, when and address where delivered, 31¢; requested after mailing, showing to whom and when delivered, 15¢.

**CERTIFIED MAIL:**

Certified mail service provides for a receipt to the sender and a record of delivery at the office of address. No record is kept at the office where mailed. It is handled in the ordinary mails and no insurance coverage is provided.

Only first-class mail having no value will be accepted as certified mail. This does not exclude articles of a non-negotiable character and other matter which would involve a cost of duplication if lost or destroyed. The mail may be sent by air on payment of the required postage. Return receipt service requested at the time of mailing only, and special delivery service are available.

Fees are as follows: Fee in addition to postage, 15¢; return receipt showing to whom and when delivered, 7¢; return receipt showing to whom, when, and address where delivered, 31¢; inquiry fee, 10¢; restricted delivery, 20¢.

**INSURED MAIL:**

Fee for insured mail (savings bonds, stubs, etc.) treated as registered mail under special authorization by the Department: 20¢.

Fees for domestic insured mail (third- and fourth-class matter):

Indemnity limit	Fee
\$ .01 to \$ 5.00 .....	5¢
5.01 to 10.00 .....	10¢
10.01 to 25.00 .....	15¢
25.01 to 50.00 .....	20¢
50.01 to 100.00 .....	30¢
100.01 to 200.00 .....	35¢

**C.O.D. MAIL:**

Fees for domestic unregistered C.O.D. mail (third- and fourth-class matter and sealed domestic mail matter of any class bearing postage at the first-class rate):

Indemnity limit	Fee
\$ .01 to \$ 5.00 .....	.30
5.01 to 10.00 .....	.40
10.01 to 25.00 .....	.60
25.01 to 50.00 .....	.70
50.01 to 100.00 .....	.80
100.01 to 150.00 .....	.90
150.01 to 200.00 .....	1.00

Fees for domestic registered C.O.D. mail (sealed domestic mail of any class bearing postage at the first-class rate):

Amount collectible and indemnity payable	Fee
\$ .01 to \$ 10.00 .....	\$ .80
10.01 to 50.00 .....	1.10
50.01 to 100.00 .....	1.20
100.01 to 200.00* .....	1.40

\* Limit of collections.

When indemnity in excess of \$200 is desired, the fees for domestic registered C.O.D. mail are:

Indemnity limit	Fee
\$200.01 to \$ 300.00 .....	\$1.50
300.01 to 400.00 .....	1.60
400.01 to 500.00 .....	1.70
500.01 to 600.00 .....	1.80
600.01 to 700.00 .....	1.90
700.01 to 800.00 .....	2.00
800.01 to 1000.00 .....	2.10

**MISCELLANEOUS:**

In registered and insured mail, a receipt card will be returned to the sender upon request. When a card is requested showing to whom and when the delivery was made, the rate is 7¢ if the request is made at the time of mailing, 15¢ if made thereafter. When a card is requested showing to whom and when the delivery was made and the address, the rate is 31¢ and must be paid at the time of mailing.

Fees for effecting delivery of domestic registered, insured, and C.O.D. mail to addressee only or to addressee or order: 20¢.

Fee for notifying sender or his representative of inability to deliver a C.O.D. article: 5¢.

Certificates of mailing for ordinary mail of any class: 3¢ for each article described thereon. Additional certificates for ordinary, registered, insured and C.O.D. mail: 1¢ for each article described thereon.

The sending of registered or insured mail to Army and Navy personnel overseas is restricted. Consult postmaster for details. C.O.D. mail cannot be sent to Navy personnel or board ships or at overseas shore stations.

**FOREIGN REGULAR MAIL:**

*Letters and letter packages:* To Canada and Mexico, 3¢ per oz. or fraction. To all other countries, 8¢ for 1st oz., 4¢ per additional oz. or fraction. Weight limit: 4 lb. 6 oz. (60 lb. to Canada).

*Post cards:* To Canada and Mexico, 2¢ each, 4¢ with reply paid. To all other countries, 4¢ each, 8¢ with reply paid.

**FOREIGN AIRMAIL:**

*Air-letter sheets:* Air letters, consisting of sheets which can be folded into the

form of an envelope and sealed, are acceptable for dispatch by airmail at a uniform rate of 10¢ each to all foreign countries. The sheets are sold at all post offices

at 10¢ each. No enclosures, adhesive tape or stickers are permitted.

Letters and letter packages: See table for rates.

### Airmail Rates from U. S. to Selected Countries

Country	Air-mail <sup>1</sup>	Air parcel post			Country	Air-mail <sup>1</sup>	Air parcel post		
		Initial unit <sup>2</sup>	Addl. weight <sup>3</sup>	Limit; lbs.			Initial unit <sup>2</sup>	Addl. weight <sup>3</sup>	Limit; lbs.
Albania.....	\$.15	....	....	..	Indonesia.....	\$.25	\$1.75	\$1.00	11
Algeria.....	.15	....	....	..	Iran.....	.25	1.47	.72	44
Argentina.....	.10	\$1.51	\$.76	44	Iraq.....	.25	1.47	.72	44
Australia.....	.25	1.62	1.27	22	Ireland.....	.15	.97	.37	22
Austria.....	.15	1.05	.49	22	Israel.....	.25	1.42	.67	22
Bahamas.....	.10	.83	.14	22	Italy.....	.15	1.08	.50	44
Belgium.....	.15	.98	.43	44	Jamaica.....	.10	.95	.18	22
Bermudas.....	.10	.76	.13	22	Japan.....	.25	1.27	.91	22
Bolivia.....	.10	1.08	.40	44	Jordan.....	.25	....	....	..
Brazil.....	.10	1.48	.64	44	Korea, Rep. of.....	.25	1.37	1.01	22
British Guiana.....	.10	1.07	.39	22	Lebanon.....	.25	1.22	.64	44 <sup>11</sup>
British Honduras.....	.10	.80	.20	22	Liberia.....	.25	.86	.56	22
Bulgaria.....	.15	....	....	..	Mexico.....	.06 <sup>6</sup>	.64	.18	44
Burma.....	.25	....	....	..	Morocco, French.....	.15	1.19	.54	44
Canada <sup>5, 6</sup> .....	.06	....	....	..	Netherlands.....	.15	.89	.44	44
Ceylon.....	.25	1.75	1.00	22	New Zealand.....	.25	1.82	1.17	22
Chile.....	.10	1.31	.56	22	Nicaragua.....	.10	.80	.29	44
China <sup>7</sup> .....	.25	1.43 <sup>8</sup>	1.08	44	Norway.....	.15	1.02	.47	44
Colombia.....	.10	1.21	.40	44	Pakistan.....	.25	1.63	.84	22
Costa Rica.....	.10	.79	.29	44	Panamá.....	.10	.91	.21	44
Cuba.....	.10	( <sup>9</sup> )	( <sup>9</sup> )	22	Paraguay.....	.10	1.00	.50	44
Czechoslovakia.....	.15	.88	.48	44	Peru.....	.10	1.23	.37	44
Denmark.....	.15	.97	.47	44	Philippines.....	.25	1.81	1.26	44 <sup>9</sup>
Dominican Republic.....	.10	.86	.22	44	Poland.....	.15	1.06	.52	44
Ecuador.....	.10	1.24	.33	44	Portugal.....	.15	.71	.44	22
Egypt.....	.15	1.35	.64	22	Rumania.....	.15	....	....	..
El Salvador.....	.10	1.02	.26	44	Saudi Arabia.....	.25	1.60 <sup>11</sup>	.80 <sup>11</sup>	22 <sup>11</sup>
Ethiopia.....	.25	....	....	..	Spain.....	.15	1.25	.50	22
Finland.....	.15	.88	.51	44	Surinam.....	.10	.92	.41	44
France.....	.15	1.22	.44	44	Sweden.....	.15	.85	.49	44
French Guiana.....	.10	.79	.44	11	Switzerland.....	.15	.92	.46	44
Germany.....	.15	.95	.45	44	Syria.....	.25	1.22	.64	44 <sup>12</sup>
Greece.....	.15	1.07	.57	22	Thailand.....	.25	2.29	1.50	22
Guatemala.....	.10	1.01	.25	44	Turkey.....	.15	1.15	.57	44
Haiti.....	.10	.72	.21	44	U. of S. Africa.....	.25	1.31	.94	11
Honduras, Rep. of.....	.10	.78	.28	44 <sup>10</sup>	U.S.S.R.....	.15	1.66	.63	22
Hong Kong.....	.25	1.74	1.39	22	United Kingdom.....	.15	1.00	.41	22
Hungary.....	.15	....	....	..	Uruguay.....	.10	1.26	.76	44
Iceland.....	.15	.89	.33	44	Venezuela.....	.10	1.27	.36	44
India.....	.25	1.70	.96	22	Yugoslavia.....	.15	.87	.52	44

<sup>1</sup> For letters and letter packages. Unless otherwise indicated, rate shown is per each  $\frac{1}{4}$  oz., and weight is limited to 4 lb., 8 oz. For rates for commercial papers, printed matter, samples of merchandise, small packages, 8-oz. merchandise packages, combination packages and articles grouped together, consult local postmaster. <sup>2</sup> Rate for 4 oz. or fraction thereof. <sup>3</sup> Rate for each additional 4 oz. or fraction thereof. <sup>4</sup> Parcels for Brazil exceeding 22 lb. accepted for following offices only: Belem (Para.), Belo Horizonte, Florianopolis, Fortaleza, Manaus, Pelotas, Porto Alegre, Recife (Pernambuco), Rio de Janeiro, Rio Grande (Rio Grande do Sul), Salvador (Bahia), Santos and Sao Paulo. <sup>5</sup> Per oz.; post cards each 4c. <sup>6</sup> Articles limited to 60 lb. in weight. <sup>7</sup> Registered and ordinary articles (unregistered) articles for all other destinations in China, including Manchuria and Mongolia, prepaid at airmail rate will be accepted for transmission by air to Hong Kong and onward transmission by surface means. <sup>8</sup> Parcels for many offices are limited to 22 lb. or 11 lb. Consult local postmaster for limitations. <sup>9</sup> Service to Cuba is limited to parcels weighing over 8 oz. and up to 22 lb. Cost for initial weight unit, which is over 8 oz. and up to 12 oz., is \$1.10. Each additional 4 oz. or fraction is 15¢. Packages weighing 8 oz. or less must not have customs declarations or parcel post stickers attached. <sup>10</sup> Parcels for Honduras exceeding 22 lb. accepted for following offices only: Amapala, Comayagua, La Ceiba, Manichito, Progreso, Puerto Castilla, Puerto Cortez, San Pedro Sula, Tegucigalpa and Tela. <sup>11</sup> Air parcels for Saudi Arabia limited to the following places only: Al Gaba, Al Lith, Al Wejh, Daba, Dammam, Dhahran, Hassa, Jiddah, Jizan, Karif, Khobar, Mecca, Medina, Qunfudha, Rabigh, Rastanurra, Riyadh, Umm Lej and Yenbo. <sup>12</sup> Limit to Chahaba and Sakhabad is 11 lb.; limit to Tel-Abiad and Yabroud is 22 lb. <sup>13</sup> Parcels for Lebanon exceeding 11 lb. not accepted for following offices: Ain-Zhalat, Baino, Falougha, Hammana, Koubayat, Maaser-el-Chouf, Ras-Baalbeck and Souk-el-Gharb. NOTE: For rates to countries not shown in this table, consult local postmaster. Leaders (....) indicate that there is no air-parcel-post service to the country.

## HOW A PRESIDENT IS ELECTED

### Selection of Delegates

**FIRST, AT FULL DRESS MEETINGS** several months before, the national committees decide the time and place of the conventions. Before the conventions meet, each party selects delegates from every state and territory.

Democrats allow 2 delegates with 1 vote apiece for each Senator, or 4 delegates with  $\frac{1}{2}$  vote apiece. Two delegates are allowed for each Congressman. Also, a bonus vote of 4 is allowed each state that went Democratic in the last Presidential election. These states may elect 8 delegates with  $\frac{1}{2}$  vote each. Six delegates each are allowed to Puerto Rico, D. C., Alaska, and Hawaii, and 2 each to the Canal Zone and the Virgin Islands.

Republicans allow each state 4 delegates-at-large and 2 for each Representative-at-large, as well as 6 additional delegates if the state went Republican in the previous Presidential election or, in that election or a subsequent one held prior to the next Republican National Convention, elects a Republican U. S. Senator or Governor. In addition, each Congressional district within the state that cast 2,000 Republican votes at the last election is permitted a delegate, with an additional delegate if that district cast 10,000 votes. Republicans further allow 4 delegates-at-large for Alaska, 6 for D. C., 6 for Hawaii (plus 4 for having elected a Delegate to Congress), 3 for Puerto Rico and 1 for the Virgin Islands.

Each party provides for the selection of an equal number of alternates to serve in the absence of the regular delegates. Delegates are chosen differently in the different states.

### The Conventions

At each convention a temporary chairman is chosen, usually to deliver the party's keynote speech. After a credentials committee seats the various delegates, a permanent chairman is elected. The convention then votes on a platform, drawn up by the platform committee.

By the third or fourth day, Presidential nominations begin. The chairman calls the roll of states alphabetically. A state may place a candidate in nomination or yield to another state.

Voting, again alphabetically by voice vote, begins after all nominations have been made and seconded. A simple majority is required in each party, although this may require many ballots.

Finally, the Vice Presidential candidate is selected. Although there is no law saying that the candidates *must* come from different states, it is practically necessary for this to be the case. Otherwise, accord-

ing to the Constitution (*see* Amendment XII), electors from that state could vote for only one of the candidates and would have to cast their other vote for some person of another state. This could result in the awkward situation of a Presidential candidate's receiving a majority electoral vote and his running mate's failing to.

### The Electoral College

The next step in the process is the nomination of electors in each state, according to its laws. These electors must not be Federal office holders. In the November election, the voters cast their votes for electors, not for President. In some states, the ballots include only the names of the Presidential and Vice Presidential candidates; in others, they include only names of the electors. Nowadays, it is rare for electors to be split between parties. The last such occurrence was in Tennessee in 1948; the last before that, in West Virginia in 1916. On three occasions (1824, 1876 and 1888), the candidate with the largest popular vote failed to obtain an electoral-vote majority.

Each state has as many electors as it has United States Senators and members of the House of Representatives. There are 96 Senators and 435 Representatives, a total of 531 electoral votes, of which 266 are needed to win.

On the first Monday after the second Wednesday in December, the electors cast their votes in their respective state capitols. Constitutionally they may vote for someone other than the party candidate but practically they cannot since they are pledged to one party and its candidate on the ballot. Should the Presidential or Vice-Presidential candidate die between the November election and the December meetings, the electors pledged to vote for him could vote for whomever they pleased. However, it seems certain that the national committee would attempt to get an agreement among the state party leaders for a replacement candidate.

The votes of the electors, certified by the states, are sent to Congress, where the president of the Senate opens the certificates and has them counted in the presence of both Houses on January 6. The new President is inaugurated at noon on January 20.

Should no candidate receive a majority of the electoral vote for President, the House of Representatives chooses a President from among the three highest candidates, voting, not as individuals, but as states, with a majority (now 25) needed to elect. Should no Vice Presidential candidate obtain the majority, the Senate, voting as individuals, chooses from the highest two.



## U. S. National Conventions Since 1856

Opening date	Party	Where held	Presidential nominee	Vote
June 17, 1856	R	Philadelphia	John C. Frémont	520
June 2, 1856	D	Cincinnati	James Buchanan	296
May 16, 1860	R	Chicago	Abraham Lincoln	364
April 23, 1860	D	Charleston & Baltimore	S. A. Douglas	181
June 7, 1864	R <sup>1</sup>	Baltimore	Abraham Lincoln	Unanimous
Aug. 29, 1864	D	Chicago	Geo. B. McClellan	202½
May 20, 1868	R	Chicago	U. S. Grant	Unanimous
July 4, 1868	D	New York City	Horatio Seymour	Unanimous
June 5, 1872	R	Philadelphia	U. S. Grant	Unanimous
June 9, 1872	D	Baltimore	Horace Greeley	688
June 14, 1876	R	Cincinnati	R. B. Hayes	384
June 28, 1876	D	St. Louis	S. J. Tilden	508
June 2, 1880	R	Chicago	J. A. Garfield	399
June 23, 1880	D	Cincinnati	W. S. Hancock	705
June 3, 1884	R	Chicago	J. G. Blaine	541
July 11, 1884	D	Chicago	Grover Cleveland	683
June 19, 1888	R	Chicago	Benjamin Harrison	544
June 6, 1888	D	St. Louis	Grover Cleveland	By acclamation
June 7, 1892	R	Minneapolis	Benjamin Harrison	535⅙
June 21, 1892	D	Chicago	Grover Cleveland	617½
June 16, 1896	R	St. Louis	William McKinley	661½
July 7, 1896	D	Chicago	William J. Bryan	500
June 19, 1900	R	Philadelphia	William McKinley	Unanimous
July 4, 1900	D	Kansas City	William J. Bryan	By acclamation
June 21, 1904	R	Chicago	Theodore Roosevelt	Unanimous
July 6, 1904	D	St. Louis	Alton B. Parker	678
June 16, 1908	R	Chicago	William H. Taft	702
July 7, 1908	D	Denver	William J. Bryan	892½
June 18, 1912	R	Chicago	William H. Taft	561
June 25, 1912	D	Baltimore	Woodrow Wilson	990
June 7, 1916	R	Chicago	Charles E. Hughes	949½
June 14, 1916	R	St. Louis	Woodrow Wilson	By acclamation
June 8, 1920	R	Chicago	Warren G. Harding	692⅓
June 28, 1920	D	San Francisco	James M. Cox	732½
June 10, 1924	R	Cleveland	Calvin Coolidge	1,065
June 24, 1924 <sup>2</sup>	D	New York City	John W. Davis	839 <sup>3</sup>
June 12, 1928	R	Kansas City	Herbert Hoover	837
June 26, 1928	D	Houston	Alfred E. Smith	849½
June 14, 1932	R	Chicago	Herbert Hoover	1,126½
June 27, 1932	D	Chicago	F. D. Roosevelt	945
June 9, 1936	R	Cleveland	Alfred M. Landon	984
June 23, 1936	D	Philadelphia	F. D. Roosevelt	By acclamation
June 24, 1940	R	Philadelphia	Wendell L. Willkie	Unanimous
July 15, 1940	D	Chicago	F. D. Roosevelt	Unanimous
June 26, 1944	R	Chicago	Thomas E. Dewey	1,056
July 19, 1944	D	Chicago	F. D. Roosevelt	1,086-90
June 21, 1948	R	Philadelphia	Thomas E. Dewey	1,094-0
July 12, 1948	D	Philadelphia	Harry S. Truman	947½-263½
July 17, 1948	( <sup>4</sup> )	Birmingham	J. Strom Thurmond	By acclamation
July 22, 1948	P	Philadelphia	Henry A. Wallace	By acclamation
July 7, 1952	R	Chicago	Dwight D. Eisenhower	845-361
July 21, 1952	D	Chicago	Adlai E. Stevenson	By acclamation
Aug. 13, 1956	D	Chicago	Adlai E. Stevenson	By acclamation
Aug. 20, 1956	R	San Francisco	Dwight D. Eisenhower	Unanimous

<sup>1</sup> The Convention adopted the name Union party so as to attract War Democrats and others favoring prosecution of the war. <sup>2</sup> In session until July 10, 1924. <sup>3</sup> 103d ballot. <sup>4</sup> States' Rights delegates from 13 Southern states. <sup>5</sup> Progressive party.

## Presidential Succession

The following is the order of the succession to the Presidency. No person may become President, however, unless he is eligible under the Constitution.

1. Vice President of the U. S.
2. Speaker of the House.
3. President pro tempore of the Senate.
4. Secretary of State.

5. Secretary of the Treasury.
6. Secretary of Defense.
7. Attorney General.
8. Postmaster General.
9. Secretary of the Interior.
10. Secretary of Agriculture.
11. Secretary of Commerce.
12. Secretary of Labor.

## Presidential Elections, 1789 to 1952

Year	Presidential candidates	Party	Electoral vote	Year	Presidential candidates	Party	Electoral vote
1789 <sup>1,2</sup>	George Washington	(no party)	69	1796 <sup>1</sup>	John Adams	Federalist	71
	John Adams	(no party)	34		Thomas Jefferson	Dem.-Rep.	68
	Scattering	(no party)	35		Thomas Pinckney	Federalist	59
	Votes not cast		8		Aaron Burr	Dem.-Rep.	30
1792 <sup>1</sup>	George Washington	Federalist	132		Scattering		48
	John Adams	Federalist	77	1800 <sup>1,3</sup>	Thomas Jefferson	Dem.-Rep.	73
	George Clinton	Anti-Federalist	50		Aaron Burr	Dem.-Rep.	73
	Thomas Jefferson	Anti-Federalist	4		John Adams	Federalist	65
	Aaron Burr	Anti-Federalist	1		Charles C. Pinckney	Federalist	64
	Votes not cast		6		John Jay	Federalist	1

<sup>1</sup> For the original method of electing the President and the Vice President, see Article II, Section 1, of the Constitution. <sup>2</sup> Only 10 states participated in the election. The New York legislature chose no electors, and North Carolina and Rhode Island had not yet ratified the Constitution. <sup>3</sup> As Jefferson and Burr were tied, the House of Representatives chose the President. In a vote by states, 10 votes were cast for Jefferson, 4 for Burr; 2 votes were not cast.

Year	Presidential candidates	Party	Electoral vote	Vice-presidential candidates	Party	Electoral vote
1804 <sup>1</sup>	Thomas Jefferson	Dem.-Rep.	162	George Clinton	Dem.-Rep.	162
	Charles C. Pinckney	Federalist	14	Rufus King	Federalist	14
1808	James Madison	Dem.-Rep.	122	George Clinton	Dem.-Rep.	113
	Charles C. Pinckney	Federalist	47	Rufus King	Federalist	47
	George Clinton	Dem.-Rep.	6	John Langdon	Ind. (no party)	9
	Votes not cast		1	James Madison	Dem.-Rep.	3
				James Monroe	Dem.-Rep.	3
				Votes not cast		1
1812	James Madison	Dem.-Rep.	128	Elbridge Gerry	Dem.-Rep.	131
	De Witt Clinton	Federalist	89	Jared Ingersoll	Federalist	86
	Votes not cast		1	Votes not cast		1
1816	James Monroe	Dem.-Rep.	183	Daniel D. Tompkins	Dem.-Rep.	183
	Rufus King	Federalist	34	John E. Howard	Federalist	22
	Votes not cast		1	James Ross	Ind. (no party)	5
				John Marshall	Federalist	4
				Robert G. Harper	Ind. (no party)	3
				Votes not cast		4
1820	James Monroe	Dem.-Rep.	231	Daniel D. Tompkins	Dem.-Rep.	218
	John Quincy Adams	Ind. (no party)	1	Richard Stockton	Ind. (no party)	8
	Votes not cast		3	Daniel Rodney	Ind. (no party)	4
				Richard Rush	Ind. (no party)	1
				Robert G. Harper	Ind. (no party)	1
				Votes not cast		3
1824 <sup>2</sup>	John Quincy Adams	(no party)	84	John C. Calhoun	(no party)	182
	Andrew Jackson	(no party)	99	Nathan Sanford	(no party)	30
	William H. Crawford	(no party)	41	Nathaniel Macon	(no party)	24
	Henry Clay	(no party)	37	Andrew Jackson	(no party)	13
				Martin Van Buren	(no party)	9
				Henry Clay	(no party)	2
				Votes not cast		1
1828	Andrew Jackson	Democratic	178	John C. Calhoun	Democratic	171
	John Quincy Adams	Natl. Rep.	83	Richard Rush	Natl. Rep.	83
				William Smith	Democratic	7
1832	Andrew Jackson	Democratic	219	Martin Van Buren	Democratic	189
	Henry Clay	Natl. Rep.	49	John Sergeant	Natl. Rep.	49
	John Floyd	Ind. (no party)	11	Henry Lee	Ind. (no party)	11
	William Wirt <sup>3</sup>	Antimasonic	7	Amos Ellmaker	Antimasonic	7
	Votes not cast		2	William Wilkins	Ind. (no party)	30
				Votes not cast		2
1836	Martin Van Buren	Democratic	170	Richard M. Johnson <sup>4</sup>	Democratic	147
	William H. Harrison	Whig	73	Francis Granger	Whig	77
	Hugh L. White	Whig	26	John Tyler	Democratic	47
	Daniel Webster	Whig	14	William Smith	Ind. (no party)	23
	W. P. Mangum	Ind. (no party)	11			
1840	William H. Harrison <sup>5</sup>	Whig	234	John Tyler	Whig	234
	Martin Van Buren	Democratic	60	Richard M. Johnson	Democratic	48
				L. W. Tazewell	Ind. (no party)	11
				James K. Polk	Democratic	1

Year	Presidential candidates	Party	Electoral vote	Vice-presidential candidates	Party	Electoral vote
1844	James K. Polk	Democratic	170	George M. Dallas	Democratic	170
	Henry Clay	Whig	105	Theo. Frelinghuysen	Whig	105
1848	Zachary Taylor <sup>a</sup>	Whig	163	Millard Fillmore	Whig	163
	Lewis Cass	Democratic	127	William O. Butler	Democratic	127
1852	Franklin Pierce	Democratic	254	William R. King	Democratic	254
	Winfield Scott	Whig	42	William A. Graham	Whig	42
1856	James Buchanan	Democratic	174	John C. Breckinridge	Democratic	174
	John C. Frémont	Republican	114	William L. Dayton	Republican	114
	Millard Fillmore	American <sup>7</sup>	8	A. J. Donelson	American <sup>7</sup>	8
1860	Abraham Lincoln	Republican	180	Hannibal Hamlin	Republican	180
	John C. Breckinridge	Democratic	72	Joseph Lane	Democratic	72
	John Bell	Const. Union	39	Edward Everett	Const. Union	39
	Stephen A. Douglas	Democratic	12	H. V. Johnson	Democratic	12
1864	Abraham Lincoln <sup>a</sup>	Union <sup>10</sup>	212	Andrew Johnson	Union <sup>10</sup>	212
	George B. McClellan	Democratic	21	G. H. Pendleton	Democratic	21
1868	Ulysses S. Grant	Republican	214	Schuyler Colfax	Republican	214
	Horatio Seymour	Democratic	80	Francis P. Blair, Jr.	Democratic	80
	Votes not counted <sup>a</sup>		23	Votes not counted <sup>a</sup>		23

<sup>1</sup> The first election in which the electors voted for President and Vice President on separate ballots. (See Amendment XII to the Constitution.) <sup>2</sup> As no candidate had an electoral-vote majority, the House of Representatives chose the President from the first three. In a vote by states, 13 votes were cast for Adams, 7 for Jackson, and 4 for Crawford. <sup>3</sup> The Antimasonic party on Sept. 26, 1831, was the first party to hold a nominating convention to choose candidates for President and Vice President. <sup>4</sup> As Johnson did not have an electoral-vote majority, the Senate chose him 33-14 over Granger, the others being legally out of the race. <sup>5</sup> Harrison died Apr. 4, 1841, and Tyler succeeded him Apr. 6. <sup>6</sup> Taylor died July 9, 1850, and Fillmore succeeded him July 10. <sup>7</sup> Also known as the Know-Nothing party. <sup>8</sup> Lincoln died Apr. 15, 1865, and Johnson succeeded him the same day. <sup>9</sup> 23 Southern electoral votes were excluded. <sup>10</sup> Name adopted by the Republican National Convention of 1864. Johnson was a War Democrat.

Year	Presidential candidates	Party	Electoral vote	Popular vote <sup>1</sup>	Vice-presidential candidates and party
1872	Ulysses S. Grant	Republican	286	3,597,132	Henry Wilson—R
	Horace Greeley	Dem., Liberal Rep.	(?)	2,834,125	B. Gratz Brown—D, LR—(47)
	Thomas A. Hendricks	Democratic	42		Scattering—(19)
	B. Gratz Brown	Dem., Liberal Rep.	18		Votes not counted—(14)
	Charles J. Jenkins	Democratic	2		
	David Davis	Democratic	1		
	Votes not counted		17		
1876 <sup>3</sup>	Rutherford B. Hayes	Republican	185	4,033,768	William A. Wheeler—R
	Samuel J. Tilden	Democratic	184	4,285,992	Thomas A. Hendricks—D
	Peter Cooper	Greenback	0	81,737	Samuel F. Cary—G
1880	James A. Garfield <sup>4</sup>	Republican	214	4,449,053	Chester A. Arthur—R
	Winfield S. Hancock	Democratic	155	4,442,035	William H. English—D
	James B. Weaver	Greenback	0	308,578	B. J. Chambers—G
1884	Grover Cleveland	Democratic	219	4,911,017	Thomas A. Hendricks—D
	James G. Blaine	Republican	182	4,848,334	John A. Logan—R
	Benjamin F. Butler	Greenback	0	175,370	A. M. West—G
	John P. St. John	Prohibition	0	150,369	William Daniel—P
1888	Benjamin Harrison	Republican	233	5,440,216	Levi P. Morton—R
	Grover Cleveland	Democratic	168	5,538,233	A. G. Thurman—D
	Clinton B. Fisk	Prohibition	0	249,506	John A. Brooks—P
	Alson J. Streeter	Union Labor	0	146,935	Charles E. Cunningham—UL
1892	Grover Cleveland	Democratic	277	5,556,918	Adlai E. Stevenson—D
	Benjamin Harrison	Republican	145	5,176,108	Whitelaw Reid—R
	James B. Weaver	People's <sup>5</sup>	22	1,041,028	James G. Field—Peo
	John Bidwell	Prohibition	0	264,133	James B. Cranfill—P
1896	William McKinley	Republican	271	7,035,638	Garret A. Hobart—R
	William J. Bryan	Dem., People's <sup>5</sup>	176	6,467,946	Arthur Sewall—D—(149)
	John M. Palmer	Natl. Dem.	0	133,148	Thomas E. Watson—Peo—(27)
	Joshua Levering	Prohibition	0	132,007	Simon B. Buckner—ND
1900					Hale Johnson—P
	William McKinley <sup>6</sup>	Republican	292	7,219,530	Theodore Roosevelt—R
	William J. Bryan	Dem., People's <sup>5</sup>	155	6,358,071	Adlai E. Stevenson—D, Peo
	John G. Woolley	Prohibition	0	208,914	Henry B. Metcalf—P
	Eugene V. Debs	Social Democratic	0	94,768	Job Harriman—SD



Year	Presidential candidates	Party	Electoral vote	Popular vote <sup>1</sup>	Vice-presidential candidates and party
1904	Theodore Roosevelt	Republican	336	7,628,834	Charles W. Fairbanks—R
	Alton B. Parker	Democratic	140	5,084,491	Henry G. Davis—D
	Eugene V. Debs	Socialist	0	402,400	Benjamin Hanford—S
	Silas C. Swallow	Prohibition	0	258,536	George W. Carroll—P
	Thomas E. Watson	People's	0	117,183	Thomas H. Tibbles—Peo
1908	William H. Taft	Republican	321	7,679,006	James S. Sherman—R
	William J. Bryan	Democratic	162	6,409,106	John W. Kern—D
	Eugene V. Debs	Socialist	0	420,820	Benjamin Hanford—S
	Eugene W. Chafin	Prohibition	0	253,840	Aaron S. Watkins—P
	Thomas L. Hisgen	Independence	0	82,872	John T. Graves—I
1912	Woodrow Wilson	Democratic	435	6,286,214	Thomas R. Marshall—D
	Theodore Roosevelt	Progressive	88	4,126,020	Hiram Johnson—Prog
	William H. Taft	Republican	8	3,483,922	Nicholas M. Butler—R <sup>7</sup>
	Eugene V. Debs	Socialist	0	897,011	Emil Seidel—S
	Eugene W. Chafin	Prohibition	0	206,275	Aaron S. Watkins—P
1916	Woodrow Wilson	Democratic	277	9,129,606	Thomas R. Marshall—D
	Charles E. Hughes	Republican	254	8,538,221	Charles W. Fairbanks—R
	A. L. Benson	Socialist	0	585,113	G. R. Kirkpatrick—S
	J. Frank Hanly	Prohibition	0	220,506	Ira Landrith—P
1920	Warren G. Harding <sup>8</sup>	Republican	404	16,152,200	Calvin Coolidge—R
	James M. Cox	Democratic	127	9,147,353	Franklin D. Roosevelt—D
	Eugene V. Debs	Socialist	0	917,799	Seymour Stedman—S
	P. P. Christensen	Farmer-Labor	0	265,411	Max S. Hayes—FL
	Aaron S. Watkins	Prohibition	0	189,408	D. Leigh Colvin—P
1924	Calvin Coolidge	Republican	382	15,725,016	Charles G. Dawes—R
	John W. Davis	Democratic	136	8,385,586	Charles W. Bryan—D
	Robert M. LaFollette	Progressive, Socialist	13	4,822,856	Burton K. Wheeler—Prog S
1928	Herbert Hoover	Republican	444	21,392,190	Charles Curtis—R
	Alfred E. Smith	Democratic	87	15,016,443	Joseph T. Robinson—D
	Norman Thomas	Socialist	0	267,420	James H. Maurer—S
1932	Franklin D. Roosevelt	Democratic	472	22,821,857	John N. Garner—D
	Herbert Hoover	Republican	59	15,761,841	Charles Curtis—R
	Norman Thomas	Socialist	0	884,781	James H. Maurer—S
	William Z. Foster	Communist	0	102,991	James W. Ford—C
	William D. Upshaw	Prohibition	0	81,869	Frank S. Regan—P
1936	Franklin D. Roosevelt	Democratic	523	27,751,597	John N. Garner—D
	Alfred M. Landon	Republican	8	16,679,583	Frank Knox—R
	William Lemke	Union	0	882,479	Thomas C. O'Brien—U
	Norman Thomas	Socialist	0	187,720	George Nelson—S
	Earl Browder	Communist	0	80,159	James W. Ford—C
1940	Franklin D. Roosevelt	Democratic	449	27,244,160	Henry A. Wallace—D
	Wendell L. Willkie	Republican	82	22,305,198	Charles L. McNary—R
	Norman Thomas	Socialist	0	100,264	Maynard C. Krueger—S
1944	Franklin D. Roosevelt <sup>9</sup>	Democratic	432	25,602,504	Harry S. Truman—D
	Thomas E. Dewey	Republican	99	22,006,285	John W. Bricker—R
	Norman Thomas	Socialist	0	80,426	Darlington Hoopes—S
1948	Harry S. Truman	Democratic	303	24,105,695	Alben W. Barkley—D
	Thomas E. Dewey	Republican	189	21,969,170	Earl Warren—R
	J. Strom Thurmond	States' Rights Dem.	39	1,169,021	Fielding L. Wright—SR
	Henry A. Wallace	Progressive	0	1,156,103	Glen Taylor—Prog
	Norman Thomas	Socialist	0	139,009	Tucker P. Smith—S
	Claude A. Watson	Prohibition	0	103,216	Dale Learn—Proh
1952	Dwight D. Eisenhower	Republican	442	33,824,351	Richard M. Nixon—R
	Adlai E. Stevenson	Democratic	89	27,314,987	John J. Sparkman—D
	Vincent W. Hallinan	Progressive	0	132,608	Charlotta A. Bass—Prog

<sup>1</sup> For those candidates receiving over 75,000 votes. <sup>2</sup> Greeley died Nov. 29, 1872, before his 66 electors voted. In the electoral balloting for President, 63 of Greeley's votes were scattered among Hendricks, Brown, Jenkins and Davis; the other 3, included in "Votes not counted," were cast for Greeley by electors from Georgia. This was the first election in which every state chose its electors by popular vote. <sup>3</sup> After the voting of the electoral college, Tilden had 184 undisputed votes, and Hayes 168. However, 22 other votes were in doubt, because two sets of electoral ballots were received from South Carolina, Louisiana, Florida and Oregon. For each of the three Southern states, one set was completely Democratic, the other completely Republican. For Oregon, one set gave all 3 of the state's votes to Hayes, the other gave one of the votes to Tilden. To settle the dispute, Congress created an Electoral Commission on Jan. 29, 1877. This Commission, consisting of 5 Supreme Court justices, 5 senators and 5 representatives (8 Republicans and 7 Democrats), gave the 22 votes in question to Hayes. <sup>4</sup> Garfield died Sept. 19, 1881, and Arthur succeeded him Sept. 20. <sup>5</sup> The members of the People's party were known as Populists. <sup>6</sup> McKinley died Sept. 14, 1901, and Roosevelt succeeded him the same day. <sup>7</sup> James S. Sherman, Republican candidate for Vice President, died Oct. 30, 1912, and the Republican electoral votes were cast for Butler. <sup>8</sup> Harding died Aug. 2, 1923, and Coolidge succeeded him Aug. 3. <sup>9</sup> Roosevelt died Apr. 12, 1945, and Truman succeeded him the same day. NOTE: For 1956 election, see Index.

## Presidential Election of 1928

Source: Secretaries of State of the several states from records filed with the House of Representatives.

### CANDIDATES FOR PRESIDENT AND VICE PRESIDENT:

Republican—Herbert Hoover, California; Charles Curtis, Kansas.

Democratic—Alfred E. Smith, New York; Joseph T. Robinson, Arkansas.

Socialist—Norman Thomas, New York; James H. Maurer, Pennsylvania.

Socialist Labor—Verne L. Reynolds, New York; Jeremiah D. Crowley, New York.

Prohibition—William F. Varney, New York; James A. Edgerton, Virginia.

Workers—William Z. Foster, Illinois; Benjamin Gitlow, New York.

State	Total	Rep.	Dem.	Plur.	Electoral R D	Soc.	Soc. Lab.*	Prohib.	Others†
Alabama.....	248,982	120,725	127,797	7,072 D	12	460			
Arizona.....	91,254	52,533	38,537	13,996 R	3				184
Arkansas.....	197,693	77,751	119,196	41,445 D	9	429			317
California.....	1,796,656	1,162,323	614,365	547,958 R	13	19,595			373
Colorado.....	392,242	253,872	133,131	120,741 R	6	3,472			1,767
Connecticut.....	553,031	296,614	252,040	44,574 R	7	3,019	622		736
Delaware.....	105,891	68,860	36,643	32,217 R	3	329			59
Florida.....	253,674	144,168	101,764	42,404 R	6	4,036			3,706
Georgia.....	229,159	63,498	129,602	66,104 D	14	124			35,935
Idaho.....	154,230	99,848	53,074	46,774 R	4	1,308			
Illinois.....	3,107,489	1,769,141	1,313,817	455,324 R	29	19,138	1,812		3,581
Indiana.....	1,421,314	848,290	562,691	285,599 R	15	3,871	645	5,496	321
Iowa.....	1,009,362	623,818	378,936	244,882 R	13	2,960	230		3,418
Kansas.....	713,200	513,672	193,003	320,669 R	10	6,205			320
Kentucky.....	940,604	558,064	381,070	176,994 R	13	837	340		293
Louisiana.....	215,833	51,160	164,655	113,495 D	10				18
Maine.....	262,171	179,923	81,179	98,744 R	6	1,068			1
Maryland.....	528,348	301,479	223,626	77,853 R	8	1,701	906		636
Massachusetts.....	1,577,827	775,566	792,758	17,192 D	18	6,262	773		2,468
Michigan.....	1,372,082	965,396	396,762	568,634 R	15	3,516	799	2,728	2,881
Minnesota.....	970,976	560,977	396,451	164,526 R	12	6,774	1,921		4,853
Mississippi.....	151,692	27,153	124,539	97,386 D	10				
Missouri.....	1,500,721	834,080	662,562	171,518 R	18	3,739	340		
Montana.....	194,108	113,300	78,578	34,722 R	4	1,667			563
Nebraska.....	547,138	345,745	197,959	147,786 R	8	3,434			
Nevada.....	32,417	18,327	14,090	4,237 R	3				
New Hampshire.....	196,747	115,404	80,715	34,689 R	4	455			173
New Jersey.....	1,549,381	926,050	616,517	309,533 R	14	4,897	500	160	1,257
New Mexico.....	118,014	69,645	48,211	21,434 R	3				158
New York.....	4,466,072	2,193,344	2,089,863	103,481 R	45	107,332	4,211		71,322
North Carolina.....	636,070	348,992	287,078	61,914 R	12				
North Dakota.....	239,867	131,441	106,648	24,793 R	5	842			936
Ohio.....	2,508,346	1,627,546	864,210	763,336 R	24	8,683	1,515	3,556	2,836
Oklahoma.....	618,427	394,046	219,174	174,872 R	10	3,924			1,283
Oregon.....	319,942	205,341	109,223	96,118 R	5	2,720	1,564		1,094
Pennsylvania.....	3,150,615	2,055,382	1,067,586	987,796 R	38	18,647	380	3,880	4,740
Rhode Island.....	242,784	117,522	118,973	1,451 D	5		416		5,873
South Carolina.....	68,605	3,188	62,700	59,512 D	9	47			2,670
South Dakota.....	261,865	157,603	102,660	54,943 R	5	443			1,159
Tennessee.....	363,473	195,388	167,343	28,045 R	12	631			111
Texas.....	708,999	367,036	341,032	26,004 R	20	722			209
Utah.....	176,604	94,618	80,985	13,633 R	4	954			47
Vermont.....	135,191	90,404	44,440	45,964 R	4			338	9
Virginia.....	305,358	164,609	140,146	24,463 R	12	250	180		173
Washington.....	500,840	335,844	156,772	179,072 R	7	2,615	4,068		1,541
West Virginia.....	642,752	375,551	263,784	111,767 R	8	1,313		1,703	401
Wisconsin.....	1,016,872	544,205	450,259	93,946 R	13	18,213	381	2,245	1,569
Wyoming.....	84,496	52,748	29,299	23,449 R	3	788			1,661
Total.....	36,879,414	21,392,190	15,016,443	6,375,747 R	444	87	267,420	21,603	20,106

\* Labor party in Maryland; Industrial party in Minnesota; Industrialist party in Pennsylvania.

† Breakdown of other votes: Workers 48,770; Anti-Smith 38,541; Farmer-Labor 6,390; void or scattering votes 60,700; blank or defective ballots 7,251.

# Presidential Election of 1932

## CANDIDATES FOR PRESIDENT AND VICE PRESIDENT:

Democratic—Franklin D. Roosevelt, New York; John N. Garner, Texas.

Republican—Herbert Hoover, California; Charles Curtis, Kansas.

Socialist—Norman Thomas, New York; James H. Maurer, Pennsylvania.

Socialist Labor—Verne L. Reynolds, New York; John W. Aiken, Massachusetts.

Prohibition—William D. Upshaw, Georgia; Frank S. Regan, Illinois.

Communist—William Z. Foster, Illinois; James W. Ford, New York.

Liberty—W. H. Harvey, Arkansas; F. B. Hemenway, Washington.

State	Total	Dem.	Rep.	Plur.	Electoral D R	Soc. Soc.	Soc. Lab.*	Prohib.	Others†
Alabama.....	245,034	207,910	34,675	173,235 D	11 ..	2,030	.....	13	406
Arizona.....	118,251	79,264	36,104	43,160 D	3 ..	2,618	.....	.....	265
Arkansas.....	220,562	189,602	28,467	161,135 D	9 ..	1,269	.....	.....	1,224
California.....	2,266,972	1,324,157	847,902	476,255 D	22 ..	63,299	.....	20,637	10,977
Colorado.....	457,696	250,877	189,617	61,260 D	6 ..	13,591	427	1,928	1,256
Connecticut.....	594,207	281,632	288,420	6,788 R	.. 8	20,480	2,287	.....	1,388
Delaware.....	112,901	54,319	57,073	2,754 R	.. 3	1,376	.....	.....	133
Florida.....	276,252	206,307	69,170	137,137 D	7 ..	775	.....	.....	.....
Georgia.....	255,590	234,118	19,863	214,255 D	12 ..	461	.....	1,125	23
Idaho.....	186,520	109,479	71,312	38,167 D	4 ..	526	.....	.....	5,203
Illinois.....	3,407,926	1,882,304	1,432,756	449,548 D	29 ..	67,258	3,638	6,388	15,582
Indiana.....	1,576,927	862,054	677,184	184,870 D	14 ..	21,388	2,070	10,399	3,832
Iowa.....	1,036,687	598,019	414,433	183,586 D	11 ..	20,467	.....	2,111	1,657
Kansas.....	791,978	424,204	349,498	74,706 D	9 ..	18,276	.....	.....	.....
Kentucky.....	983,063	580,574	394,716	185,858 D	11 ..	3,853	1,396	2,252	272
Louisiana.....	268,804	249,418	18,853	230,565 D	10 ..	.....	.....	.....	533
Maine.....	298,444	128,907	166,631	37,724 R	.. 5	2,489	255	.....	162
Maryland.....	511,054	314,314	184,184	130,130 D	8 ..	10,489	1,036	.....	1,031
Massachusetts.....	1,580,114	800,148	736,959	63,189 D	17 ..	34,305	2,668	1,142	4,892
Michigan.....	1,664,628	871,700	739,894	131,806 D	19 ..	39,205	1,401	2,893	9,535
Minnesota.....	1,002,843	600,806	363,959	236,847 D	11 ..	25,476	.....	.....	12,602
Mississippi.....	146,034	140,168	5,180	134,988 D	9 ..	686	.....	.....	.....
Missouri.....	1,609,894	1,025,406	564,713	460,693 D	15 ..	16,374	404	2,429	568
Montana.....	216,479	127,286	78,078	49,208 D	4 ..	7,891	.....	.....	3,224
Nebraska.....	570,135	359,082	201,177	157,905 D	7 ..	9,876	.....	.....	.....
Nevada.....	41,430	28,756	12,674	16,082 D	3 ..	.....	.....	.....	.....
New Hampshire.....	205,520	100,680	103,629	2,949 R	.. 4	947	.....	.....	264
New Jersey.....	1,630,063	806,630	775,684	30,946 D	16 ..	42,998	1,062	774	2,915
New Mexico.....	151,606	95,089	54,217	40,872 D	3 ..	1,776	.....	.....	524
New York.....	4,753,698	2,534,959	1,937,963	596,996 D	47 ..	177,397	10,339	.....	93,040
North Carolina.....	711,501	497,566	208,344	289,222 D	13 ..	5,591	.....	.....	.....
North Dakota.....	256,290	178,350	71,772	106,578 D	4 ..	3,521	.....	.....	2,647
Ohio.....	2,610,088	1,301,695	1,227,679	74,016 D	26 ..	64,094	1,968	7,421	7,231
Oklahoma.....	704,633	516,468	188,165	328,303 D	11 ..	.....	.....	.....	.....
Oregon.....	368,751	213,871	136,019	77,852 D	5 ..	15,450	1,730	.....	1,681
Pennsylvania.....	2,859,002	1,295,948	1,453,540	157,592 R	.. 36	91,119	659	11,319	6,417
Rhode Island.....	266,170	146,604	115,266	31,338 D	4 ..	3,138	433	183	546
South Carolina.....	104,407	102,347	1,978	100,469 D	8 ..	82	.....	.....	.....
South Dakota.....	288,438	183,515	99,212	84,303 D	4 ..	1,551	.....	463	3,697
Tennessee.....	390,638	259,817	126,806	133,011 D	11 ..	1,786	.....	1,995	234
Texas.....	863,426	760,348	97,959	662,389 D	23 ..	4,450	.....	.....	669
Utah.....	206,579	116,750	84,795	31,955 D	4 ..	4,087	.....	.....	947
Vermont.....	136,980	56,266	78,984	22,718 R	.. 3	1,533	.....	.....	197
Virginia.....	297,942	203,979	89,637	114,342 D	11 ..	2,382	.....	1,843	101
Washington.....	614,814	353,260	208,645	144,615 D	8 ..	17,080	1,009	1,540	33,280
West Virginia.....	743,774	405,124	330,731	74,393 D	8 ..	5,133	.....	2,342	444
Wisconsin.....	1,114,815	707,410	347,741	359,669 D	12 ..	53,379	494	2,672	3,119
Wyoming.....	96,962	54,370	39,583	14,787 D	3 ..	2,829	.....	.....	180
Totals.....	39,816,522	22,821,857	15,761,841	7,060,016 D	472 59	884,781	33,276	81,869	232,898

\* Industrialist party in Pennsylvania.

† Breakdown of other votes: Communist 102,991; Liberty 53,425; Farmer-Labor 7,309; National 1,645; Industrialist (Minn.) 770; Jobless 725; Independent 533; Jacksonian 104; void or scattering 65,396.



# Presidential Election of 1936

## CANDIDATES FOR PRESIDENT AND VICE PRESIDENT:

**Democratic**—Franklin D. Roosevelt, New York; John N. Garner, Texas.

**Republican**—Alfred M. Landon, Kansas; Frank Knox, Illinois.

**Socialist**—Norman Thomas, New York; George Nelson, Wisconsin.

**Prohibition**—D. Leigh Colvin, New York; Claude A. Watson, California.

**Communist**—Earl Browder, Kansas; James W. Ford, New York.

**Union**—William Lemke, North Dakota; Thomas C. O'Brien, Massachusetts.

**Socialist Labor**—John W. Aiken, Massachusetts; Emil F. Teichert, New York.

State	Total	Dem.	Rep.	Plur.	Electoral		D	R	Soc.	Prohib.	Comm.	Others*
Alabama.....	275,744	238,196	35,358	202 838	D	11	..	242	719	678	551	
Arizona.....	124,163	86,722	33,433	53,289	D	3	..	317	384	....	3,307	
Arkansas.....	179,423	146,765	32,039	114,726	D	9	..	446	....	169	4	
California.....	2,638,882	1,766,836	836,431	930,405	D	22	..	11,331	12,917	10,877	490	
Colorado.....	488,676	295,021	181,267	113,754	D	6	..	1,593	....	497	10,298	
Connecticut.....	690,783	382,189	278,685	103,504	D	8	..	5,683	....	1,193	23,033	
Delaware.....	127,603	69,702	54,014	15,688	D	3	..	172	....	51	3,664	
Florida.....	327,365	249,117	78,248	170,869	D	7	..	....	....	....	....	
Georgia.....	293,178	255,364	36,942	218,422	D	12	..	68	663	....	141	
Idaho.....	199,623	125,683	66,256	59,427	D	4	..	....	....	....	7,684	
Illinois.....	3,956,522	2,282,999	1,570,393	712,606	D	29	..	7,530	3,439	801	91,360	
Indiana.....	1,650,897	934,974	691,570	243,404	D	14	..	3,856	....	1,090	19,407	
Iowa.....	1,142,733	621,756	487,977	133,779	D	11	..	1,373	1,182	506	29,939	
Kansas.....	865,013	464,520	397,727	66,793	D	9	..	2,766	....	....	....	
Kentucky.....	926,206	541,944	369,702	172,242	D	11	..	632	929	204	12,795	
Louisiana.....	329,778	292,894	36,791	256,103	D	10	..	....	....	....	93	
Maine.....	304,240	126,333	168,823	42,490	R	5	..	783	334	257	7,710	
Maryland.....	624,896	389,612	231,435	158,177	D	8	..	1,629	....	915	1,305	
Massachusetts.....	1,840,357	942,716	768,613	174,103	D	17	..	5,111	1,032	2,930	119,955	
Michigan.....	1,805,093	1,016,794	699,733	317,061	D	19	..	8,208	579†	3,384	76,395	
Minnesota.....	1,129,975	698,811	350,461	348,350	D	11	..	2,872	....	2,574	75,257	
Mississippi.....	162,090	157,318	4,443	152,875	D	9	..	329	....	....	....	
Missouri.....	1,828,635	1,111,043	697,891	413,152	D	15	..	3,454	908	417	14,922	
Montana.....	230,512	159,690	63,598	96,092	D	4	..	1,066	224	385	5,549	
Nebraska.....	608,032	347,454	247,731	100,323	D	7	..	....	....	....	12,847	
Nevada.....	43,848	31,925	11,923	20,002	D	3	..	....	....	....	....	
New Hampshire.....	218,114	108,460	104,642	3,798	D	4	..	....	....	....	193	4,819
New Jersey.....	1,820,437	1,083,850	720,322	363,528	D	16	..	3,931	926	1,639	9,769	
New Mexico.....	168,920	105,838	61,710	44,128	D	3	..	343	62	43	924	
New York.....	5,596,398	3,293,222†	2,180,670	1,112,552	D	47	..	86,897	....	35,609	....	
North Carolina.....	839,462	616,141	223,283	392,858	D	13	..	21	....	11	6	
North Dakota.....	273,716	163,148	72,751	90,397	D	4	..	552	197	360	36,708	
Ohio.....	3,012,425	1,747,122	1,127,709	619,413	D	26	..	117	....	5,251	132,226	
Oklahoma.....	749,740	501,069	245,122	255,947	D	11	..	2,221	1,328	....	....	
Oregon.....	414,021	266,733	122,706	144,027	D	5	..	2,143	4	104	22,331	
Pennsylvania.....	4,138,105	2,353,788	1,690,300	663,488	D	36	..	14,375	6,691	4,060	68,891	
Rhode Island.....	311,149	165,233	125,012	40,221	D	4	..	....	....	411	20,493	
South Carolina.....	115,437	113,791	1,646	112,145	D	8	..	....	....	....	....	
South Dakota.....	296,452	160,137	125,977	34,160	D	4	..	....	....	....	....	
Tennessee.....	475,531	327,083	146,516	180,567	D	11	..	685	632	319	10,388	
Texas.....	843,482	734,485	103,874	630,611	D	23	..	1,075	514	253	3,281	
Utah.....	216,677	150,246	64,555	85,691	D	4	..	432	43	280	1,121	
Vermont.....	143,689	62,124	81,023	18,899	R	3	..	....	....	405	137	
Virginia.....	334,590	234,980	98,336	136,644	D	11	..	313	594	98	269	
Washington.....	692,338	459,579	206,892	252,687	D	8	..	3,496	1,041	1,907	19,423	
West Virginia.....	830,073	502,582	325,486	177,096	D	8	..	832	1,173	....	....	
Wisconsin.....	1,258,712	802,984	380,828	422,156	D	12	..	10,626	1,071	2,197	61,006	
Wyoming.....	103,382	62,624	38,739	23,885	D	3	..	200	75	91	1,653	
Total.....	45,647,117	27,751,597	16,679,583	10,797,090	D	523	8	187,720	37,661	80,159	910,397	

\* Breakdown of other votes: Union (including Royal Oak, Independent, and Third) 882,479; Socialist Labor (including Labor, Industrial, and Independent Labor) 12,802; National Union for Social Justice 9,407; Independent Republican 3,222; Christian 1,598; scattering 889.

† Commonwealth votes.

‡ Includes 274,924 American Labor votes.

# Presidential Election of 1940

## CANDIDATES FOR PRESIDENT AND VICE PRESIDENT:

Democratic—Franklin D. Roosevelt, New York; Henry A. Wallace, Iowa.

Republican—Wendell L. Willkie, New York; Charles L. McNary, Oregon.

Socialist—Norman Thomas, New York; Maynard C. Krueger, Illinois.

Prohibition—Roger W. Babson, Massachusetts; Edgar V. Moorman, Illinois.

Communist—Earl Browder, Kansas; James W. Ford, New York.

Socialist Labor—John W. Aiken, Massachusetts; Aaron M. Orange, New York.

State	Total	Dem.	Rep.	Plur.	Electoral						Others*
					D	R	Soc.	Prohib.	Comm.		
Alabama.....	294,219	250,726	42,184	208,542	D	11	100	700	509	.....	
Arizona.....	150,039	95,267	54,030	41,237	D	3	.....	742	.....	.....	
Arkansas.....	201,838	158,622	42,122	116,500	D	9	301	793	.....	.....	
California.....	3,268,791	1,877,618	1,351,419	526,199	D	22	.....	9,400	13,586	16,768	
Colorado.....	549,004	265,554	279,576	14,022	R	6	1,899	1,597	378	.....	
Connecticut.....	781,502	417,621	361,819†	55,802	D	8	.....	.....	1,091	971	
Delaware.....	136,374	74,599	61,440	13,159	D	3	115	220	.....	.....	
Florida.....	485,492	359,334	126,158	233,176	D	7	.....	.....	.....	.....	
Georgia.....	312,553	265,194	23,934	241,260	D	12	.....	983	.....	22,442	
Idaho.....	235,168	127,842	106,553	21,289	D	4	497	.....	276	.....	
Illinois.....	4,217,935	2,149,934	2,047,240	102,694	D	29	10,914	9,190	.....	657	
Indiana.....	1,782,747	874,063	899,466	25,403	R	14	2,075	6,437	.....	706	
Iowa.....	1,215,430	578,800	632,370	53,570	R	11	.....	2,284	1,524	452	
Kansas.....	860,297	364,725	489,169	124,444	R	9	2,347	4,056	.....	.....	
Kentucky.....	970,063	557,222	410,384	146,838	D	11	1,014	1,443	.....	.....	
Louisiana.....	372,305	319,751	52,446	267,305	D	10	.....	.....	.....	108	
Maine.....	320,840	156,478	163,951	7,473	R	5	.....	.....	411	.....	
Maryland.....	660,104	384,546	269,534	115,012	D	8	4,093	.....	1,274	657	
Massachusetts.....	2,026,993	1,076,522	939,700	136,822	D	17	4,091	1,370	3,806	1,504	
Michigan.....	2,085,929	1,032,991	1,039,917	6,926	R	19	7,593	1,795	2,834	799	
Minnesota.....	1,251,188	644,196	596,274	47,922	D	11	5,454	.....	2,711	2,553	
Mississippi.....	175,824	168,267	2,814	165,453	D	9	193	.....	.....	4,550	
Missouri.....	1,833,729	958,476	871,009	87,467	D	15	2,226	1,809	.....	209	
Montana.....	247,873	145,698	99,579	46,119	D	4	1,443	664	489	.....	
Nebraska.....	615,878	263,677	352,201	88,524	R	7	.....	.....	.....	.....	
Nevada.....	53,174	31,945	21,229	10,716	D	3	.....	.....	.....	.....	
New Hampshire.....	235,419	125,292	110,127	15,165	D	4	.....	.....	.....	.....	
New Jersey.....	1,974,920	1,016,442	945,478	70,964	D	16	2,837	872	8,836	455	
New Mexico.....	183,014	103,699	79,315	24,384	D	3	.....	.....	.....	.....	
New York.....	6,301,596	3,251,918†	3,027,478	224,440	D	47	18,950	3,250	.....	.....	
North Carolina.....	822,648	609,015	213,633	395,382	D	13	.....	.....	.....	.....	
North Dakota.....	280,775	124,036	154,590	30,554	R	4	1,279	325	.....	545	
Ohio.....	3,319,912	1,733,139	1,586,773	146,366	D	26	.....	.....	.....	.....	
Oklahoma.....	826,212	474,313	348,872	125,441	D	11	.....	3,027	.....	.....	
Oregon.....	481,240	258,415	219,555	38,860	D	5	398	154	191	2,527	
Pennsylvania.....	4,078,714	2,171,035	1,889,848	281,187	D	36	10,967	.....	4,519	2,345	
Rhode Island.....	321,148	182,182	138,653	43,529	D	4	.....	74	239	.....	
South Carolina.....	99,830	95,470	1,727	93,743	D	8	.....	.....	.....	2,633	
South Dakota.....	308,427	131,362	177,065	45,703	R	4	.....	.....	.....	.....	
Tennessee.....	522,823	351,601	169,153	182,448	D	11	463	1,606	.....	.....	
Texas.....	1,041,168	840,151	199,152	640,999	D	23	728	925	212	.....	
Utah.....	247,819	154,277	93,151	61,126	D	4	200	.....	191	.....	
Vermont.....	143,062	64,269	78,371	14,102	R	3	.....	.....	411	11	
Virginia.....	346,607	235,961	109,363	126,598	D	11	282	882	71	48	
Washington.....	793,833	462,145	322,123	140,022	D	8	4,586	1,686	2,626	667	
West Virginia.....	868,076	495,662	372,414	123,248	D	8	.....	.....	.....	.....	
Wisconsin.....	1,405,540	704,821	679,206	25,615	D	12	15,071	2,148	2,394	1,900	
Wyoming.....	112,240	59,287	52,633	6,654	D	3	148	172	.....	.....	
Total.....	49,820,312	27,244,160	22,305,198	4,938,962	D	449	100,264	58,604	48,579	63,507	

\* Breakdown of other votes: Independent Democrat 22,428; Progressive 16,506; Socialist Labor 10,164; Independent Republican 4,550; Industrial 2,553; Jeffersonian Democrat 2,496; Industrial Government 1,518; Labor Party of Maryland 657; Alfred Knutson 645; Republican (Tolbert Faction) 137; scattering 1,953.

† Includes 798 Union votes.

‡ Includes 417,418 American Labor votes.

# Presidential Election of 1944

## CANDIDATES FOR PRESIDENT AND VICE PRESIDENT:

**Democratic**—Franklin D. Roosevelt, New York; Harry S. Truman, Missouri.

**Republican**—Thomas E. Dewey, New York; John W. Bricker, Ohio.

**Socialist**—Norman Thomas, New York; Darlington Hoopes, Pennsylvania.

**Prohibition**—Claude A. Watson, California; Andrew Johnson, Kentucky.

**Socialist Labor\***—Edward A. Teichert, Pennsylvania; Arla A. Albaugh, Ohio.

State	Total	Dem.	Rep.	Plur.	Electoral		D	R	Soc.	Prohib.	Soc. Lab.	Others†
Alabama	244,743	198,918	44,540	154,378	D	11			190	1,095		
Arizona	137,634	80,926	56,287	24,639	D	4				421		
Arkansas	212,956	148,965	63,551	85,414	D	9						
California	3,520,875	1,988,564	1,512,965	475,599	D	25			3,923	14,770	327	326
Colorado	505,039	234,331	268,731	34,400	R			6	1,977			
Connecticut	831,990	435,146	390,527	44,619	D	8			5,097		1,220	
Delaware	125,361	68,166	56,747	11,419	D	3			154	294		
Florida	482,592	339,377	143,215	196,162	D	8						
Georgia	328,109	268,187	56,507	211,680	D	12			6	36		
Idaho	208,321	107,399	100,137	7,262	D	4			282	503		3,373
Illinois	4,036,061	2,079,479	1,939,314	140,165	D	21			180	7,411	9,677	
Indiana	1,672,091	781,403	875,891	94,488	R			13	2,223	12,574		
Iowa	1,052,599	499,876	547,267	47,391	R			10	1,511	3,752	193	
Kansas	733,776	287,458	442,096	154,638	R			8	1,613	2,609		
Kentucky	867,921	472,589	392,448	80,141	D	11			535	2,023	326	
Louisiana	349,383	281,564	67,750	213,814	D	10						69
Maine	296,400	140,631	155,434	14,803	R			5			335	
Maryland	608,439	315,490	292,949	22,541	D	8						
Massachusetts	1,960,665	1,035,296	921,350	113,946	D	16				973	2,780	266
Michigan	2,205,223	1,106,899	1,084,423	22,476	D	19			4,598	6,503	1,264	1,536
Minnesota	1,125,529	589,864	527,416	62,448	D	11			5,073		3,176	
Mississippi	180,080	158,515	3,742	154,773	D	9						17,823
Missouri	1,571,677	807,356	761,175	46,181	D	15			1,751	1,175	220	
Montana	207,355	112,556	93,163	19,393	D	4			1,296	340		
Nebraska	563,126	233,246	329,880	96,634	R			6				
Nevada	54,234	29,623	24,611	5,012	D	3						
New Hampshire	229,625	119,663	109,916	9,747	D	4			46			
New Jersey	1,963,761	987,874	961,335	26,539	D	16			3,358	4,255	6,939	
New Mexico	152,225	81,389	70,688	10,701	D	4				148		
New York	6,316,790	3,304,238†	2,987,647	316,591	D	47			10,553		14,352	
North Carolina	790,554	527,399	263,155	264,244	D	14						
North Dakota	220,171	100,144	118,535	18,391	R			4	943	549		
Ohio	3,153,056	1,570,763	1,582,293	11,530	R			25				
Oklahoma	722,636	401,549	319,424	82,125	D	10				1,663		
Oregon	480,147	248,635	225,365	23,270	D	6			3,785	2,362		
Pennsylvania	3,794,793	1,940,479	1,835,054	105,425	D	35			11,721	5,750	1,789	
Rhode Island	299,276	175,356	123,487	51,869	D	4				433		
South Carolina	103,375	90,601	4,547	86,054	D	8				365		7,862
South Dakota	232,076	96,711	135,365	38,654	R			4				
Tennessee	510,692	308,707	200,311	108,396	D	12			792	882		
Texas	1,150,326	821,605	191,425	630,180	D	23			593	1,013		135,690
Utah	248,319	150,088	97,891	52,197	D	4			340			
Vermont	125,361	53,820	71,527	17,707	R			3				
Virginia	388,485	242,276	145,243	97,033	D	11			417	459	90	14
Washington	856,328	486,774	361,689	125,085	D	8			3,824	2,396	1,645	
West Virginia	715,596	392,777	322,819	69,958	D	8						
Wisconsin	1,339,152	650,413	674,532	24,119	R			12	13,205		1,002	
Wyoming	101,340	49,419	51,921	2,502	R			3				
Total	47,976,263	25,602,504	22,006,285	3,596,219	D	432		99	80,426	74,754	45,335	166,959

\* Industrial Government candidates in Minnesota, New York and Pennsylvania.

† Breakdown of other votes: Texas Regulars 135,439; Regular Democrat 9,964; Independent Republican 7,859; Southern Democrat 7,799; Independent Democrat 3,373; America First 1,781; Republican (Tolbert Faction) 63; scattering 681.

‡ Includes 496,405 American Labor and 329,235 Liberal votes.



# Presidential Election of 1948

## CANDIDATES FOR PRESIDENT AND VICE PRESIDENT

Democratic—Harry S. Truman, Missouri; Alben Barkley, Kentucky.

Republican—Thomas E. Dewey, New York; Earl Warren, California.

States' Rights Democratic—J. Strom Thurmond, South Carolina; Fielding L. Wright, Mississippi.

Progressive<sup>1</sup>—Henry A. Wallace, Iowa; Glen H. Taylor, Idaho.

Socialist—Norman Thomas, New York; Tucker P. Smith, Michigan.

Prohibition—Claude A. Watson, California; Dale Learn, Pennsylvania.

Socialist Labor—Edward A. Teichert, Pennsylvania; Stephen Emery, New York.

State	Total	Dem.	Rep.	SR Dem.	Plur.	Electoral			Prog. <sup>1</sup>	Others <sup>2</sup>
						D	R	S		
Alabama.....	214,980	(*)	40,930	171,443	130,513 S	..	..	11	1,522	1,085
Arizona.....	177,065	95,251	77,597	..	17,654 D	4	..	..	3,310	907
Arkansas.....	242,475	149,659	50,959	40,068	98,700 D	9	..	..	751	1,038
California.....	4,021,538	1,913,134	1,895,269	1,228 <sup>8</sup>	17,865 D	25	..	..	190,381	21,526
Colorado.....	515,237	267,288	239,714	..	27,574 D	6	..	..	6,115	2,120
Connecticut.....	883,518	423,297	437,754	..	14,457 R	..	8	..	13,713	8,754
Delaware.....	139,073	67,813	69,588	..	1,775 R	..	3	..	1,050	622
Florida.....	577,643	281,988	194,280	89,755	87,708 D	8	..	..	11,620	..
Georgia.....	418,760	254,646	76,691	85,055	169,591 D	12	..	..	1,636	732
Idaho.....	214,816	107,370	101,514	..	5,856 D	4	..	..	4,972	960
Illinois.....	3,984,046	1,994,715	1,961,103	..	33,612 D	28	..	..	..	28,228
Indiana.....	1,656,214	807,833	821,079	..	13,246 R	..	13	..	9,649	17,653
Iowa.....	1,038,264	522,380	494,018	..	28,362 D	10	..	..	12,125	9,741
Kansas.....	788,819	351,902	423,039	..	71,137 R	..	8	..	4,603	9,275
Kentucky.....	822,658	466,756	341,210	10,411	125,546 D	11	..	..	1,567	2,714
Louisiana.....	416,326	136,344	72,657	204,290	67,946 S	..	..	10	3,035	..
Maine.....	264,787	111,916	150,234	..	38,318 R	..	5	..	1,884	753
Maryland.....	596,735	286,521	294,814	2,476 <sup>5</sup>	8,293 R	..	8	..	9,983	2,941
Massachusetts.....	2,155,347	1,151,788	909,370	..	242,418 D	16	..	..	38,157	56,032
Michigan.....	2,109,609	1,003,448	1,038,595	..	35,147 R	..	19	..	46,515	21,051
Minnesota.....	1,212,226	692,966 <sup>6</sup>	483,617	..	209,349 D	11	..	..	27,866	7,777
Mississippi.....	192,190	19,384 <sup>7</sup>	5,043 <sup>8</sup>	167,538 <sup>9</sup>	148,154 S	..	..	9	225	..
Missouri.....	1,578,628	917,315	655,039	..	262,276 D	15	..	..	3,998	2,276
Montana.....	224,278	119,071	96,770	..	22,301 D	4	..	..	7,313	1,124
Nebraska.....	488,939	224,165	264,774	..	40,609 R	..	6	..	..	..
Nevada.....	62,117	31,291	29,357	..	1,934 D	3	..	..	1,469	..
New Hampshire.....	231,440	107,995	121,299	7	13,304 R	..	4	..	1,970	169
New Jersey.....	1,949,555	895,455	981,124	..	85,669 R	..	16	..	42,683	30,293
New Mexico.....	185,767	105,464	80,303	..	25,161 D	4	..	..	..	..
New York.....	6,274,527	2,780,204 <sup>10</sup>	2,841,163	..	60,959 R	..	47	..	509,559	143,601
North Carolina.....	791,209	459,070	258,572	69,652	200,498 D	14	..	..	3,915	..
North Dakota.....	220,716	95,812	115,139	374	19,327 R	..	4	..	8,391	1,000
Ohio.....	2,936,071	1,452,791	1,445,684	..	7,107 D	25	..	..	37,596	..
Oklahoma.....	721,599	452,782	268,817	..	183,965 D	10	..	..	..	..
Oregon.....	524,080	243,147	260,904	..	17,757 R	..	6	..	14,978	5,051
Pennsylvania.....	3,735,149	1,752,426	1,902,197	..	149,771 R	..	35	..	55,161	25,365
Rhode Island.....	326,098	188,619	134,892	..	53,727 D	4	..	..	2,587	..
South Carolina.....	142,571	34,423	5,386	102,607	68,184 S	..	..	8	154	1
South Dakota.....	250,105	117,653	129,651	..	11,998 R	..	4	..	2,801	..
Tennessee.....	550,283	270,402	202,914	73,815	67,488 D	11	..	1	1,864	1,288
Texas.....	1,147,245	750,700	282,240	106,909	468,460 D	23	..	..	3,764	3,632
Utah.....	276,305	149,151	124,402	..	24,749 D	4	..	..	2,679	73
Vermont.....	123,382	45,557	75,926	..	30,369 R	..	3	..	1,279	620
Virginia.....	419,256	200,786	172,070	43,393	28,716 D	11	..	..	2,047	960
Washington.....	905,059	476,165	386,315	..	89,850 D	8	..	..	31,692	10,887
West Virginia.....	748,750	429,188	316,251	..	112,937 D	8	..	..	3,311	..
Wisconsin.....	1,276,800	647,310	590,959	..	56,351 D	12	..	..	25,282	13,249
Wyoming.....	101,425	52,354	47,947	..	4,407 D	3	..	..	931	193
Total.....	48,833,680	24,105,695	21,969,170	1,169,021	2,136,525 D	303	189	39	1,156,103	433,691

<sup>1</sup> Independent Progressive in California; Peoples in Connecticut; Independent in Kansas, Mississippi, Ohio, South Dakota; American Labor in New York; People's Progressive in Wisconsin. <sup>2</sup> Industrial Government in Minnesota. <sup>3</sup> Breakdown of other votes: Socialist 139,009; New York, Pennsylvania: Independent Socialist Labor in Wisconsin. <sup>4</sup> Christian Nationalist 42; Greenback 6; Vegetarian 4; blank 145,320; write-in 1,683; scattering 1,666; void 71. <sup>5</sup> Not on ballot. <sup>6</sup> Write-in votes. <sup>7</sup> Including Farmer-Labor votes. <sup>8</sup> National Democratic. <sup>9</sup> Contains 2,595 Republican and 2,448 Independent Republican votes. <sup>10</sup> Includes 222,562 Liberal votes.

# Presidential Election of 1952

(For 1956 election, see index.)

## CANDIDATES FOR PRESIDENT AND VICE PRESIDENT

Republican—Dwight D. Eisenhower, New York; Richard M. Nixon, California.

Democratic—Adlai E. Stevenson, Illinois; John J. Sparkman, Alabama.

Progressive—Vincent Hallinan, California; Mrs. Charlotta A. Bass, New York.

Prohibition—Stuart Hamblen, California; Enoch A. Holtwick, Illinois.

Socialist Labor—Eric Hass, New York; Stephen Emery, New York.

Socialist—Darlinton Hoopes, Pennsylvania; Samuel H. Friedman, New York.

State	Total	Rep.	Dem.	Plur.	Electoral		Prog. <sup>1</sup>	Prohib.	Soc. Lab. <sup>2</sup>	Others <sup>3</sup>
					R	D				
Alabama.....	426,120	149,231	275,075	125,844 D	..	11	....	1,814	....	....
Arizona.....	260,570	152,042	108,528	43,514 R	4	..	....	....	....	....
Arkansas.....	404,800	177,155	226,300	49,145 D	..	8	....	886	1	458
California.....	5,141,849	2,897,310	2,197,548	699,762 R	32	..	24,106	15,653	....	7,232
Colorado.....	630,103	379,782	245,504	134,278 R	8	..	1,919	....	352	2,546
Connecticut.....	1,096,911	611,012	481,649	129,363 R	6	..	....	....	535	3,715
Delaware.....	174,025	90,059	83,315	6,744 R	3	..	155	234	242	20
Florida.....	989,337	544,036	444,950	99,086 R	10	..	....	....	....	351
Georgia.....	655,803	198,979	456,823	257,844 D	..	12	....	....	....	1
Idaho.....	276,231	180,707	95,081	85,626 R	4	..	443	....	....	....
Illinois.....	4,481,058	2,457,327	2,013,920	443,407 R	27	..	....	....	9,363	448
Indiana.....	1,955,325	1,136,259	801,530	334,729 R	13	..	1,222	15,335	979	....
Iowa.....	1,268,773	808,906	451,513	357,393 R	10	..	5,085	2,882	139	248
Kansas.....	896,166	616,302	273,296	343,006 R	8	..	....	6,038	....	530
Kentucky.....	993,148	495,029	495,729	700 D	..	10	336	1,161	893	....
Louisiana.....	651,952	306,925	345,027	38,102 D	..	10	....	....	....	....
Maine.....	351,786	232,353	118,806	113,547 R	5	..	332	....	156	139
Maryland.....	902,074	499,424	395,337	104,087 R	9	..	7,313	....	....	....
Massachusetts.....	2,383,398	1,292,325	1,083,525	208,800 R	16	..	4,636	886	1,957	69
Michigan.....	2,798,592	1,551,529	1,230,657	320,872 R	20	..	3,922	10,331	1,495	658
Minnesota.....	1,379,483	763,211	608,458	154,753 R	11	..	2,666	2,147	2,383	618
Mississippi.....	285,532	( <sup>4</sup> )	172,566	59,600 D	..	8	....	....	....	112,966
Missouri.....	1,892,062	959,429	929,830	29,599 R	13	..	987	885	169	762
Montana.....	265,037	157,394	106,213	51,181 R	4	..	723	548	....	159
Nebraska.....	609,660	421,603	188,057	233,546 R	6	..	....	....	....	....
Nevada.....	82,190	50,502	31,688	18,814 R	3	..	....	....	....	....
New Hampshire.....	272,950	166,287	106,663	59,624 R	4	..	....	....	....	....
New Jersey.....	2,419,554	1,374,613	1,015,902	358,711 R	16	..	5,589	989	5,815	16,646
New Mexico.....	328,608	132,170	105,661	26,509 R	4	..	....	297	35	445
New York.....	7,128,241	3,952,815	3,104,601 <sup>4</sup>	848,214 R	45	..	64,211	....	1,560	5,054
North Carolina.....	1,210,910	558,107	652,803	94,696 D	..	14	....	....	....	....
North Dakota.....	270,127	191,712	76,694	115,018 R	4	..	344	302	....	1,075
Ohio.....	3,700,758	2,100,456	1,600,302	500,154 R	25	..	....	....	....	....
Oklahoma.....	948,984	518,045	430,939	87,106 R	8	..	....	....	....	....
Oregon.....	695,059	420,815	270,579	150,236 R	6	..	....	....	....	3,665
Pennsylvania.....	4,580,717	2,415,789	2,146,269	269,520 R	32	..	4,200	8,771	1,347	4,341
Rhode Island.....	414,498	210,935	203,293	7,642 R	4	..	187	....	83	....
South Carolina.....	341,086	168,082 <sup>5</sup>	173,004	4,922 D	..	8	....	....	....	....
South Dakota.....	294,283	203,857	90,426	113,431 R	4	..	....	....	....	....
Tennessee.....	892,553	446,147	443,710	2,437 R	11	..	885	1,432	....	379
Texas.....	2,076,006	1,102,878	969,288	133,590 R	24	..	294	1,983	....	1,563
Utah.....	329,554	194,190	135,364	58,826 R	4	..	....	....	....	....
Vermont.....	153,539	109,717	43,355	66,362 R	3	..	282	....	....	185
Virginia.....	619,689	349,037	268,677	80,360 R	12	..	311	....	1,160	504
Washington.....	1,102,708	599,107	492,845	106,262 R	9	..	2,460	....	633	7,663
West Virginia.....	873,548	419,970	453,578	33,608 D	..	8	....	....	....	....
Wisconsin.....	1,607,370	979,744	622,175	357,569 R	12	..	....	....	....	5,451
Wyoming.....	129,251	81,047	47,934	33,113 R	3	..	....	194	36	40
Total.....	61,551,978	33,824,351	27,314,987 <sup>6</sup>	6,509,364 R	442	89	132,608	72,768	29,333	177,931

<sup>1</sup> Independent Progressive in California; Peace Progressive in Massachusetts; American Labor in New York. <sup>2</sup> Independent Republican Government in Minnesota, New York and Pennsylvania. <sup>3</sup> Breakdown of Other votes: Independent (pledged to Republican candidate in Miss.), 112,966; Socialist, 18,322; Christian Nationalist, 10,557; Socialist Workers, 8,956; written-in, 4,431; Poor Man's, 4,203; scattering, 4,040; Independent, 3,665; Constitution, 2,911; Vincent Hallinan (Independent in Wis.), 2,174; People's party of Connecticut, 1,466; Farrell Dobbs (Independent in Wis.), 1,350; Darlington Hoopes (Independent in Wis.), 1,157; Eric Hass (Independent in Wis.), 770; Social Democrat, 504; America First, 233; Independent Progressive, 225; Liberty, 1. <sup>4</sup> Democratic-Farmer Labor votes. <sup>5</sup> 112,966 Independent votes were pledged to the Republican candidate; these are shown as Other votes. <sup>6</sup> Includes 416,711 Liberal votes. <sup>7</sup> Includes 158,289 votes for separate set of electors for Republican candidates by petition.

# Electoral Vote for President, 1888-1924

States	1888	1892	1896	1900	1904	1908	1912	1916	1920	1924
	Harrison, Rep. Cleveland, Dem.	Cleveland, Dem. Harrison, Rep. Weaver, Peo.	McKinley, Rep. Bryan, Dem.	McKinley, Rep. Bryan, Dem.	Roosevelt, Rep. Parker, Dem.	Taft, Rep. Bryan, Dem.	Wilson, Dem. Taft, Rep. Roosevelt, Prog.	Wilson, Dem. Hughes, Rep.	Harding, Rep. Cox, Dem.	Coolidge, Rep. Davis, Dem. La Follette, Prog.
Alabama	10	11	11	11	11	11	12	12	12	12
Arizona							3	3	3	3
Arkansas	7	8	8	8	9	9	9	9	9	9
California	8	8 1	8 1	9	10	10	2 11	13	13	13
Colorado	3		4	4	5	5	6	6	6	6
Connecticut	6	6	6	6	7	7	7	7	7	7
Delaware	3	3	3	3	3	3	3	3	3	3
Florida	4	4	4	4	5	5	6	6	6	6
Georgia	12	13	13	13	13	13	14	14	14	14
Idaho		3	3	3	3	3	4	4	4	4
Illinois	22	24	24	24	27	27	29	29	29	29
Indiana	15	15	15	15	15	15	15	15	15	15
Iowa	13	13	13	13	13	13	13	13	13	13
Kansas	9	10	10	10	10	10	10	10	10	10
Kentucky	13	13	12 1	13	13	13	13	13	13	13
Louisiana	8	8	8	8	9	9	10	10	10	10
Maine	6	6	6	6	6	6	6	6	6	6
Maryland	8	8	8	8	1 7	2 6	8	8	8	8
Massachusetts	14	15	15	15	16	16	18	18	18	18
Michigan	13	5 9	14	14	14	14	15	15	15	15
Minnesota	7	9	9	9	11	11	12	12	12	12
Mississippi	9	9	9	9	10	10	10	10	10	10
Missouri	16	17	17	17	18	18	18	18	18	18
Montana		3	3	3	3	3	4	4	4	4
Nebraska	5	8	8	8	8	8	8	8	8	8
Nevada	3	3	3	3	3	3	3	3	3	3
New Hampshire	4	4	4	4	4	4	4	4	4	4
New Jersey	9	10	10	10	12	12	14	14	14	14
New Mexico							3	3	3	3
New York	36	36	36	36	39	39	45	45	45	45
North Carolina	11	11	11	11	12	12	12	12	12	12
North Dakota		1 1 1	3	3	4	4	5	5	5	5
Ohio	23	1 22	23	23	23	23	24	24	24	24
Oklahoma						7	10	10	10	10
Oregon	3	3 1	4	4	4	4	5	5	5	5
Pennsylvania	30	32	32	32	34	34	38	38	38	38
Rhode Island	4	4	4	4	4	4	5	5	5	5
South Carolina	9	9	9	9	9	9	9	9	9	9
South Dakota		4	4	4	4	4	5	5	5	5
Tennessee	12	12	12	12	12	12	12	12	12	12
Texas	13	15	15	15	18	18	20	20	20	20
Utah			3	3	3	3	4	4	4	4
Vermont	4	4	4	4	4	4	4	4	4	4
Virginia	12	12	12	12	12	12	12	12	12	12
Washington		4	4	4	5	5	7	7	7	7
West Virginia	6	6	6	6	7	7	8	1 7	8	8
Wisconsin	11	12	12	12	12	13	13	13	13	13
Wyoming		3	3	3	3	3	3	3	3	3
Total	233 168	277 145 22	271 176	292 155	336 140	321 162	435 8 88	277 254	404 127	382 136 13

NOTE: For electoral votes by state in elections later than 1924, see preceding pages.



## Qualifications for Voting in the 48 States

Source: Questionnaires to the states.

State	Minimum length of U. S. citizenship	Residence <sup>1</sup>			Literacy test	Poll tax <sup>2</sup>
		State	County	District		
Alabama.....	.....	1 yr.	6 mo.	3 mo. <sup>3</sup>	Yes	\$1.50 <sup>14</sup>
Arizona.....	1 yr.	1 yr.	30 da.	30 da.	Yes	.....
Arkansas.....	.....	1 yr.	6 mo.	30 da. <sup>4</sup>	.....	1.00
California.....	3 mo.	1 yr.	3 mo.	54 da. <sup>4</sup>	Yes	.....
Colorado.....	.....	1 yr.	3 mo.	30 da. <sup>5</sup>	.....	.....
Connecticut.....	.....	1 yr.	.....	6 mo. <sup>6</sup>	Yes	.....
Delaware.....	.....	1 yr.	3 mo.	30 da.	Yes	.....
Florida.....	.....	1 yr.	6 mo.	.....	.....	.....
Georgia <sup>7</sup> .....	.....	1 yr.	6 mo.	6 mo.	Yes	.....
Idaho.....	( <sup>8</sup> )	6 mo.	30 da.	.....	.....	.....
Illinois.....	.....	1 yr.	3 mo.	30 da.	.....	.....
Indiana.....	.....	6 mo.	2 mo. <sup>9</sup>	30 da. <sup>4</sup>	.....	.....
Iowa.....	.....	6 mo.	60 da.	10 da. <sup>4</sup>	.....	.....
Kansas.....	.....	6 mo.	.....	30 da. <sup>10</sup>	.....	.....
Kentucky.....	.....	1 yr.	6 mo.	60 da. <sup>4</sup>	.....	.....
Louisiana.....	.....	2 yr.	1 yr. <sup>11</sup>	3 mo. <sup>10</sup>	Yes	.....
Maine.....	.....	6 mo.	.....	3 mo. <sup>4</sup>	Yes	.....
Maryland.....	.....	1 yr.	6 mo.	6 mo.	.....	.....
Massachusetts.....	.....	1 yr.	.....	6 mo. <sup>4</sup>	Yes	.....
Michigan.....	.....	6 mo.	.....	30 da. <sup>4</sup>	.....	.....
Minnesota.....	3 mo.	6 mo.	.....	30 da.	.....	.....
Mississippi.....	.....	2 yr.	1 yr.	1 yr.	( <sup>12</sup> )	2.00
Missouri.....	.....	1 yr.	2 mo.	2 mo. <sup>4</sup>	.....	.....
Montana.....	.....	1 yr.	30 da.	30 da. <sup>4</sup>	.....	.....
Nebraska.....	.....	6 mo.	40 da.	10 da.	.....	.....
Nevada.....	.....	6 mo.	30 da.	10 da. <sup>4</sup>	.....	.....
New Hampshire.....	.....	6 mo.	.....	6 mo. <sup>4</sup>	Yes	.....
New Jersey.....	.....	1 yr.	5 mo.	.....	.....	.....
New Mexico.....	.....	1 yr.	3 mo.	30 da. <sup>4</sup>	.....	.....
New York.....	90 da.	1 yr.	4 mo.	30 da.	Yes	.....
North Carolina.....	.....	1 yr.	4 mo.	4 mo.	Yes	.....
North Dakota.....	.....	1 yr.	3 mo.	30 da. <sup>4</sup>	.....	.....
Ohio.....	.....	1 yr.	40 da.	40 da. <sup>4</sup>	.....	.....
Oklahoma.....	.....	1 yr.	6 mo.	30 da. <sup>4</sup>	.....	.....
Oregon.....	.....	6 mo.	.....	30 da. <sup>4</sup>	Yes	.....
Pennsylvania.....	1 mo.	1 yr. <sup>13</sup>	.....	2 mo.	.....	.....
Rhode Island.....	1 yr.	1 yr.	.....	6 mo. <sup>4</sup>	.....	.....
South Carolina.....	2 yr.	2 yr.	1 yr.	4 mo.	.....	( <sup>12</sup> )
South Dakota.....	5 yr.	1 yr.	3 mo.	30 da. <sup>4</sup>	.....	.....
Tennessee.....	.....	1 yr.	6 mo.	.....	.....	.....
Texas.....	.....	1 yr.	6 mo.	.....	.....	1.75 <sup>21</sup>
Utah.....	90 da.	1 yr.	4 mo.	60 da. <sup>4</sup>	.....	.....
Vermont <sup>10</sup> .....	.....	1 yr.	.....	3 mo. <sup>4,16</sup>	.....	.....
Virginia.....	.....	1 yr.	6 mo. <sup>14</sup>	30 da. <sup>4</sup>	Yes	1.50
Washington.....	.....	1 yr.	3 mo.	30 da. <sup>17</sup>	Yes	.....
West Virginia.....	.....	1 yr.	2 mo.	.....	.....	.....
Wisconsin.....	.....	1 yr.	.....	10 da.	.....	.....
Wyoming.....	.....	1 yr.	60 da.	10 da.	( <sup>12</sup> )	.....

<sup>1</sup> Registration of all or part of the voters is required in most states. <sup>2</sup> Annual levy. Although poll (or head) taxes are levied in several other states, those listed make payment of the tax a condition for voting. <sup>3</sup> Precinct or ward. <sup>4</sup> Precinct. <sup>5</sup> City or town, and 15 days in precinct. <sup>6</sup> City or town. <sup>7</sup> Minimum voting age is 18; in all other states it is 21. <sup>8</sup> First paper must have been taken out. <sup>9</sup> Township. <sup>10</sup> Township or ward. <sup>11</sup> Parish. <sup>12</sup> Must be able to read any section of state constitution. <sup>13</sup> 6 months if previously qualified elector or natural-born citizen of state. <sup>14</sup> 1953 act makes poll tax noncumulative except for 2 years preceding election in which elector offers to vote. <sup>15</sup> To qualify to vote for representatives to general assembly or justices. <sup>16</sup> County, city, or town. <sup>17</sup> City, town, ward, or precinct. <sup>18</sup> Repealed in 1945. <sup>19</sup> Precinct; municipality 4 mo. <sup>20</sup> A person must take freeman's oath as qualification for voting. <sup>21</sup> \$1.50 levied by state; 25 cents levied by most counties, but not all.

### Plurality and Majority

In order to win a plurality, a candidate must receive a greater number of votes than anyone running against him. If he receives 50 votes, for example, and two other candidates receive 49 and 2, he will have a plurality of one vote over his closest opponent.

However, a candidate does not have a majority unless he receives more than 50% of the total votes cast. In the example above, the candidate does not have a majority, because his 50 votes are less than 50% of the 101 votes cast.

If only two candidates receive votes, a plurality is necessarily a majority; but if more than two candidates receive votes, it is possible for one to have a substantial plurality without a majority.

## BIOGRAPHIES OF THE PRESIDENTS

### GEORGE WASHINGTON

was born February 22, 1732 (February 11, 1731/2, old style) in Westmoreland County, Virginia. He early trained as a surveyor; but in 1752 he was appointed adjutant in the Virginia militia, and for the next three years he took an active part in the wars against the French and Indians, serving as General Braddock's aide in the disastrous campaign against Fort Duquesne. In 1759 he resigned from the militia, married Martha Dandridge Custis, a widow, and settled down as a gentleman farmer at Mount Vernon.

As a militiaman, he had been exposed to the arrogance of the British officers, and his experience as a planter with British commercial restrictions increased his anti-British sentiment. He opposed the Stamp Act of 1765 and after 1770 became increasingly prominent in organizing resistance. A delegate to the Continental Congress, Washington was selected as commander in chief of the Continental Army and took command at Cambridge, Massachusetts, on July 3, 1775.

Inadequately supported and sometimes covertly sabotaged by the Congress, in charge of troops who were inexperienced, badly equipped and impatient of discipline, Washington conducted the war on the policy of avoiding major engagements with the British and wearing them down by harassing tactics. His able generalship, along with the French alliance and the growing weariness within Britain, brought the war to a conclusion with the surrender of Cornwallis at Yorktown on October 19, 1781.

The chaotic years under the Articles of Confederation led Washington to return to public life in the hope of promoting the formation of a strong central government. He presided over the Constitutional Convention and yielded to the universal demand that he serve as first President. In office, he sought to unite the nation in the service of establishing the authority of new government at home and abroad. Greatly distressed by the emergence of the Hamilton-Jefferson rivalry, he worked to maintain neutrality but actually sympathized more with Hamilton. Following his unanimous re-election in 1792, his second term was dominated by the Federalists. His Farewell Address rebuked party spirit and warned against foreign entanglements.

He died at Mt. Vernon on December 14, 1799. Tall, dignified and impressive, Washington gave a public impression of austerity, though he was capable of gaiety in private. His life was characterized by a

strict sense of duty to his people. The standard biographies are by Fitzpatrick, Ford, Hughes and Stephenson.

### JOHN ADAMS

was born on October 30 (October 19, old style), 1735, at Braintree (now Quincy), Massachusetts. A Harvard graduate, he considered teaching and the ministry but finally turned to law and was admitted to the bar in 1758. He opposed the Stamp Act, served as lawyer for patriots indicted by the British and, by the time of the Continental Congresses, was in the vanguard of the movement for independence. In 1778 he went to France as commissioner. Subsequently he helped negotiate the peace treaty with Britain, and in 1785 became the U. S. envoy to London. Resigning in 1788, he was elected Vice President under Washington, and was re-elected in 1792.

Though a Federalist, Adams did not get along with Hamilton who sought to prevent his election to the presidency in 1796, and thereafter intrigued against his administration. Adams was chosen with 71 electoral votes to 68 for his closest competitor, Thomas Jefferson, who became Vice President. In 1798 Adams' independent policy averted a war with France but completed the break with Hamilton and the right-wing Federalists while, at the same time, the enactment of the Alien and Sedition Acts, directed against foreigners and against critics of the government, exasperated the Jeffersonian opposition. The split between Adams and Hamilton elected Jefferson in 1800. Adams retired to his home in Quincy, Massachusetts. He later corresponded with Jefferson and they died on the same day, July 4, 1826.

Stout, somewhat vain and irascible, Adams was honest, fearless and essentially fair-minded. His *Defence of the Constitutions of Government of the United States* (1787) contains original and striking if conservative political ideas. He married Abigail Smith in 1764, and their life together was long and happy. The standard biographies are by Morse and Chinard.

### THOMAS JEFFERSON

was born on April 13 (April 2, old style), 1743, at Shadwell in Goochland (now Albemarle) County, Virginia. A William and Mary graduate, he studied law but from the start showed an interest in science and philosophy. His literary skill and political clarity brought him to the forefront

of the revolutionary movement in Virginia. As delegate to the Continental Congress, he drafted the Declaration of Independence. In 1776 he entered the Virginia House of Delegates and initiated a comprehensive reform program for the abolition of feudal survivals in land tenure and the separation of church and state.

In 1779 he became governor, but constitutional limitations on his power combined with his own lack of executive energy caused an unsatisfactory administration, culminating in Jefferson's virtual abdication when the British invaded Virginia in 1781. He now retired to his beautiful home at Monticello, to his wife, Martha Wayles Skelton, whom he had married in 1772 and who died in 1782, and to his children.

Jefferson's *Notes on Virginia* (1784-85) illustrate his many-faceted interests, his limitless intellectual curiosity, his deep faith in agrarian democracy. Sent to Congress in 1783, he helped lay down the decimal system and drafted basic reports on the organization of the western lands. In 1785 he was appointed minister to France, where the Anglo-Saxon liberalism he had drawn from Locke was stimulated by contact with the thought which would soon ferment in the French Revolution. In 1789 Washington appointed him Secretary of State. While favoring the Constitution and a strengthened central government, Jefferson came to believe that Hamilton contemplated the establishment of a monarchy. Growing differences resulted in Jefferson's resignation on Dec. 31, 1793.

Elected Vice President in 1796, Jefferson continued to serve as spiritual leader of the opposition to Federalism, particularly to the repressive Alien and Sedition Acts. He was elected President in 1801 by the House of Representatives as a result of Hamilton's decision to throw the Federalist votes to him rather than to Aaron Burr, who had tied him in electoral votes. The purchase of Louisiana from France in 1803, though in violation of his earlier constitutional scruples, was the most notable act of his administration. Re-elected in 1804 with 162 electoral votes to 14 for the Federalist Charles C. Pinckney, Jefferson tried desperately during his second term to keep the United States out of the Napoleonic Wars in Europe, employing to this end the unpopular embargo policy.

After his retirement to Monticello in 1809, he developed his interest in education, founding the University of Virginia and watching its development with never-flagging interest. He died at Monticello on July 4, 1826. Tall, loose-jointed, a poor speaker, Jefferson had an enormous variety of interests and skills, ranging from education and science to architecture and music. Economically his conception of democracy presupposed an essentially rural

community of small freeholds; but his deep and abiding faith in the common man provides inspiration for future generations. The standard biographies are by Chinard, Bowers, Kimball, Randall and Malone.

### JAMES MADISON

was born in Port Conway, Virginia, on March 16, 1751 (March 5, 1750/1, old style). A Princeton graduate, he joined the struggle for independence on his return to Virginia in 1771. In the seventies and eighties he was active both in state politics, where he championed the Jefferson reform program, and in the Continental Congress. He was influential in the Constitutional Convention as leader of the group favoring a strong central government and as recorder of the debates; and he subsequently wrote, in collaboration with Alexander Hamilton and John Jay, the *Federalist* papers to aid the campaign for the adoption of the Constitution.

In the new Congress, Madison soon emerged as the leader in the House of the men who opposed Hamilton's financial program and his pro-British leanings in foreign policy. Retiring from Congress in 1797, he continued active in Virginia and drafted the Virginia Resolution protesting the Alien and Sedition Acts. His intimacy with Jefferson made him natural choice for Secretary of State in 1801.

In 1809 Madison succeeded Jefferson as President, with 122 electoral votes to 47 for the Federalist, C. C. Pinckney, and 6 scattering. His attractive wife, Dolly Payne Todd, whom he married in 1794, brought a new social sparkle to the executive mansion. In the meantime, increasing tension with Britain culminated in the War of 1812—a war for which the United States was unprepared, and for which Madison lacked the executive talent to clear out incompetence and mobilize the nation's energies. Madison was re-elected in 1812, with 128 electoral votes to 89 for the Federalist, De Witt Clinton. In 1814 the British actually captured Washington and forced Madison to flee to Virginia.

In his domestic program, Madison capitulated to the Hamiltonian policies that he had resisted twenty years before, signing bills to establish a United States Bank and a higher tariff. Following his presidency, he remained in retirement in Virginia until his death on June 28, 1836. Small, wrinkled, unimpressive, Madison had an acute political intelligence but lacked executive force. The standard lives are by Hunt, Brant and Rives.

### JAMES MONROE

was born on April 28, 1758, in Westmoreland County, Virginia. A William and Mary graduate, he served in the army during



the first years of the Revolution and was wounded at Trenton. He then entered Virginia politics and later national politics under the sponsorship of Jefferson. In 1786 he married Eliza Kortright.

Fearing centralization, Monroe opposed the adoption of the Constitution and, as senator from Virginia, was highly critical of the Hamiltonian program. In 1794 he was appointed minister to France where his ardent sympathies with the Revolution exceeded the wishes of the State Department. A troubled diplomatic career ended with his recall in 1796. From 1799 to 1802 he was governor of Virginia. In 1803 Jefferson sent him to France to help negotiate the Louisiana Purchase and for the next few years he was active in various continental negotiations.

In 1808 Monroe flirted with the radical wing of the Republican party, which opposed Madison's candidacy; but the presidential boom came to naught and, after a brief term as governor of Virginia in 1811, Monroe accepted Madison's offer of the State Department. During the war he vainly sought a field command and served as Secretary of War from Sept., 1814, to Mar., 1815.

Elected President in 1816 with 183 electoral votes to 34 for the Federalist Rufus King, and re-elected without opposition in 1820, Monroe, the last of the Virginia dynasty, pursued the course of systematic tranquilization which won for his terms the name "the era of good feeling." He continued Madison's surrender to the Hamiltonian domestic program, signed the Missouri Compromise, acquired Florida and, with the able assistance of his Secretary of State, John Quincy Adams, promulgated the Monroe Doctrine in 1823, declaring against foreign colonization or intervention in the Americas. He died in New York City on July 4, 1831.

A sound man of medium abilities, Monroe possessed qualities of judgment rather than of leadership. The standard biographies are by Morgan, Gilman and Styron.

### JOHN QUINCY ADAMS

was born on July 11, 1767, at Braintree (now Quincy), Massachusetts, the son of John Adams. He spent his early years in Europe with his father, graduated from Harvard and entered law practice. His anti-Jeffersonian newspaper articles won him political attention. In 1794 he became minister to the Netherlands, the first of several diplomatic posts which occupied him until his return to Boston in 1801. In 1797 he married Louisa Catherine Johnson.

In 1803 he was elected to the Senate, nominally as a Federalist, but his repeated displays of independence on such issues as the Louisiana Purchase and the embargo caused his party to compel his resignation

and ostracize him socially. In 1809 Madison rewarded him for his support of Jefferson by appointing him minister to St. Petersburg. He helped negotiate the Treaty of Ghent in 1814 and in 1815 became minister to London. In 1817 Monroe appointed him Secretary of State where he served with great distinction, gaining Florida from Spain without hostilities and playing an equal part with Monroe in formulating the Monroe Doctrine.

When no presidential candidate received a majority of electoral votes in 1824, Adams, with the support of Henry Clay, was elected by the House in 1825 over Andrew Jackson who had the original plurality. Adams had ambitious plans of government activity to foster internal improvements and promote the arts and sciences; but congressional obstructionism combined with his own unwillingness or inability to play the role of a politician meant that little was accomplished. Retiring to Quincy after his defeat in 1828, he was elected to the House of Representatives in 1831 where, though nominally a Whig, he pursued as ever an independent course. He led the fight to force Congress to receive anti-slavery petitions and fathered the Smithsonian Institution.

Stricken on the floor of the House, he died on February 23, 1848. Tactless, brusque, conscientious, a rough and savage debater, Adams spared neither himself nor his enemies. His long and detailed *Diary* gives a unique picture of the personalities and politics of the times. The standard biographies are by Morse and Clark.

### ANDREW JACKSON

was born on March 15, 1767, in what is now generally agreed to be Waxhaw, South Carolina. After a turbulent boyhood as an orphan and a British prisoner, he moved west to Tennessee where he soon qualified for law practice but found time for such frontier pleasures as horse racing, cock-fighting and dueling. His marriage to Rachel Donelson Robards in 1791 was complicated by subsequent legal uncertainties about the status of her divorce. During the seventeen-nineties Jackson served in the Tennessee constitutional convention, the federal House of Representatives, the federal Senate and the Tennessee supreme court.

After some years as a country gentleman, living at the Hermitage near Nashville, Jackson in 1812 was given command of Tennessee troops sent against the Creeks. He defeated the Indians at Horseshoe Bend in 1814; subsequently he became a major general and won the Battle of New Orleans over veteran British troops though after the treaty of peace had been signed at Ghent. In 1818 General Jackson invaded Florida, captured Pensacola and hanged two Englishmen named Arbuthnot and

Ambrister, creating an international incident. A presidential boom began for him in 1821 and in its service he returned to the Senate (1823-25). Though he won a plurality of electoral votes in 1824, he lost in the House when Clay threw his strength to Adams; he won easily in 1828 by an electoral vote of 178 to 83.

As President, Jackson greatly expanded the power and prestige of the presidential office and carried through an unexampled program of domestic reform, vetoing the bill to extend the United States Bank, moving toward a hard-money currency policy and checking the program of federal internal improvements. He also vindicated federal authority against South Carolina with its doctrine of nullification and against France on the question of debts. The support given his policies by the workingmen of the East as well as by the farmers of the East, West and South resulted in his triumphant re-election in 1832 over Clay by an electoral vote of 219 to 49, with 18 scattering and 2 not cast.

After watching the inauguration of his hand-picked successor, Martin Van Buren, Jackson retired to the Hermitage where he maintained a lively interest in national affairs until his death on June 8, 1845. A tall, dignified man with a drawn and wrinkled face, Jackson has been endowed by partisan historians with a violence and irascibility he appears not to have possessed. His great contribution was to adjust the presidential office and the democratic doctrines of Jefferson to the new situation created by the Industrial Revolution. The standard biographies are by James, Bassett and Parton.

### MARTIN VAN BUREN

was born on December 5, 1782, at Kinderhook, New York. After graduating from the village school, he became a law clerk, entered practice in 1803 and soon became active in state politics as state senator and attorney general. In 1821 he was elected to the United States Senate. He threw the support of his efficient political organization, known as the Albany Regency, to William H. Crawford in 1824 and to Jackson in 1828. After leading the opposition to Adams' administration in the Senate, he served briefly as governor of New York and resigned to become Jackson's Secretary of State. He soon became on close personal terms with Jackson and played an important part in turning the Jacksonian program from the lines intended by his original Western backers.

In 1832 Van Buren became Vice President; in 1836, President, with an electoral vote of 170 against 124 scattered among four opponents. The Panic of 1837 overshadowed his term. He attributed it to

the overexpansion of the credit and favored the establishment of an independent treasury as repository for the federal funds. In 1840 he established a ten-hour day on public works. Defeated by Harrison in 1840, he was the leading contender for the Democratic nomination in 1844 until he publicly opposed immediate annexation of Texas and was subsequently beaten by the Southern delegations at the Baltimore convention. This incident increased his growing misgivings about the slave power.

After working behind the scenes among the antislavery Democrats, Van Buren joined in the movement which led to the Free-Soil party and became its candidate for President in 1848. He subsequently returned to the Democratic party while continuing to object to its pro-Southern policy. He died in Kinderhook on July 24, 1862. His *Autobiography* throws valuable sidelights on the political history of the times.

Small, erect, dapper, Van Buren had a reputation for slick politicking which won him such sobriquets as the Little Magician and the Red Fox of Kinderhook; but, as his later career showed, he was capable of taking firm and unpopular stands on public issues. His wife Hannah Hoes, whom he married in 1807, died in 1819.

The standard biographies are by Shepard and Lynch.

### WILLIAM HENRY HARRISON

was born in Charles City County, Virginia, on February 9, 1773. Joining the army in 1791, he was active in Indian fighting in the Northwest, became secretary of the Northwest Territory in 1798 and governor of Indiana in 1800. He married Anna Symmes in 1795. Growing discontent over white encroachments on Indian lands led to the formation of an Indian alliance under Tecumseh to resist further aggressions. In 1811 Harrison won a nominal victory over the Indians at Tippecanoe and in 1813 a more decisive one at the Battle of the Thames, where Tecumseh was killed.

After resigning from the army in 1814, Harrison had an obscure career in politics and diplomacy, ending up in twenty years as a county recorder in Ohio. Nominated for President in 1835 as a military hero whom the conservative politicians hoped to be able to control, he ran surprisingly well against Van Buren in 1836. Four years later he defeated Van Buren by an electoral vote of 234 to 60 but caught pneumonia and died in Washington a month after his inauguration, April 4, 1841. Harrison's qualities were those of a soldier rather than of a statesman or political leader. The standard biographies are by Cleaves and Goebel.



### JOHN TYLER

was born in Charles City County, Virginia, on March 29, 1790. A William and Mary graduate, he entered law practice and politics, serving in the House of Representatives (1816-21) and later as governor of Virginia (1825-27), and as senator. A thorough-going strict constructionist, he supported Crawford in 1824 and Jackson in 1828 but broke with Jackson over his Bank policy and became a member of the Southern state-rights group which cooperated with the Whigs. In 1836 he resigned from the Senate rather than follow instructions from the Virginia legislature to vote for a resolution expunging censure of Jackson from the Senate record.

Elected Vice President on the Whig ticket in 1840, Tyler succeeded to the presidency on Harrison's death. His strict-constructionist views soon caused a split with the Henry Clay wing of the Whig party and a stalemate on domestic questions. Tyler's more considerable achievements were his support of the Webster-Ashburton Treaty with Britain and his success in bringing about the annexation of Texas through joint congressional resolution.

After his presidency he lived in retirement in Virginia until the outbreak of the Civil War when he emerged briefly as chairman of a peace convention and then as delegate to the provisional Congress of the Confederacy. He died on January 18, 1862. He was married first to Letitia Christian March in 1813 and, two years after her death in 1842, to Julia Gardiner. Witty, amiable, courteous, Tyler was a Virginia gentleman whose presidency was hamstrung by the basic contradiction between his own ideas and those of the party which put him on the ticket as Vice President. The standard biographies are by Chitwood and Tyler.

### JAMES KNOX POLK

was born in Mecklenburg County, North Carolina, on November 2, 1795. A graduate of the University of North Carolina, he moved west to Tennessee, was admitted to the bar and soon became prominent in state politics. In 1825 he was elected to the House of Representatives where he opposed Adams and, after 1829, became Jackson's floor leader in the fight against the Bank. In 1835 he became Speaker of the House. In 1839 he was elected governor of Tennessee but was beaten in tries for re-election in 1841 and 1843.

The supporters of Van Buren for the Democratic nomination in 1844 counted on Polk as his running mate; but, when Van Buren's stand on Texas alienated Southern support, the convention swung to Polk on the ninth ballot. He was elected over Henry Clay, the Whig candidate, by an

electoral vote of 170 to 105. Rapidly disillusioning those who thought that he would not run his own administration, Polk proceeded steadily and precisely to achieve four major objectives—the acquisition of California, the settlement of the Oregon question, the reduction of the tariff and the establishment of the independent treasury. He also enlarged the Monroe Doctrine to exclude all non-American intervention in American affairs, whether forcible or not, and he forced Mexico into a war which he waged to a successful conclusion. His wife Sarah Childress, whom he married in 1824, was a woman of charm and ability. Polk died in Nashville, Tennessee, on June 15, 1849.

Serious, hardworking, lacking in color, Polk has long been underrated by historians who mistakenly regarded him as a slaveholders' puppet; in fact, few presidents have so thoroughly controlled their own administration or have so ably accomplished the purposes they set for themselves. Polk's *Diary* reflects the mood and problems of his presidency. The standard biography is by McCormac.

### ZACHARY TAYLOR

was born at Montebello, Orange County, Virginia, on November 24, 1784. Embarking on a military career in 1808, Taylor fought in the War of 1812, the Black Hawk War and the Seminole War, holding in between garrison jobs on the frontier or desk jobs in Washington. A brigadier general as a result of his victory over the Seminoles at Lake Okeechobee (1837), Taylor held a succession of Southwestern commands and in 1846 established a base on the Rio Grande, where his forces engaged in hostilities which precipitated the war with Mexico. He captured Monterrey in Sept., 1846, and, disregarding Polk's orders to stay on the defensive, defeated Santa Anna at Buena Vista in February, 1847, ending the war in the northern provinces.

Though Taylor had never cast a vote for President, his party affiliations were Whiggish, and his availability was increased by his difficulties with Polk. He was elected President over the Democrat Lewis Cass by an electoral vote of 163 to 127. During the revival of the slavery controversy, which was to result in the Compromise of 1850, Taylor began to take an increasingly firm stand against appeasing the South; but he died in Washington on July 9, 1850, in the midst of the fight over the Compromise. He married Margaret Mackall Smith in 1810. His bluff and simple soldierly qualities won him the name of Old Rough and Ready. During his brief term as President he displayed a growing insight into political questions. The standard biographies are by Hamilton and by Bent and McKinley.



### MILLARD FILLMORE

was born at Locke, Cayuga County, New York, on January 7, 1800. A lawyer, he entered politics as an Antimason under the sponsorship of Thurlow Weed, editor and party boss, and subsequently followed Weed into the Whig party. He served in the House of Representatives (1833-35 and 1837-43) and played a leading role in writing the tariff of 1842. Defeated for governor of New York in 1844, he became comptroller in 1848, was put on the Whig ticket with Taylor as a concession to the Clay wing of the party and became President upon Taylor's death in 1850.

As President, Fillmore broke with Weed and William H. Seward and associated himself with the pro-Southern Whigs, supporting the Compromise of 1850. Defeated for the Whig nomination in 1852, he ran for President in 1856 as candidate of the American or Know-Nothing party, which sought to unite the country against foreigners in the alleged hope of diverting it from the explosive slavery issue. Fillmore opposed Lincoln during the Civil War. He died in Buffalo on March 8, 1874. He was married in 1826 to Abigail Powers, who died in 1853, and in 1858 to Caroline Carmichael McIntosh. Urbane, gracious, colorless and weak, Fillmore was an undistinguished President. The standard biography is by Griffis.

### FRANKLIN PIERCE

was born at Hillsboro, New Hampshire, on November 23, 1804. A Bowdoin graduate and lawyer, he won rapid political advancement in the Democratic party, in part because of the prestige of his father, Governor Benjamin Pierce. By 1831 he was Speaker of the New Hampshire House of Representatives; from 1833 to 1837 he served in the federal House and from 1837 to 1842 in the Senate. His wife, Jane Means Appleton, whom he had married in 1834, disliked Washington and the somewhat dissipated life led by Pierce; and in 1842 Pierce, resigning from the Senate, took up a successful law practice in Concord, New Hampshire.

During the Mexican War Pierce was a brigadier general. Thereafter he continued to oppose antislavery tendencies within the Democratic party. As a result, he was the Southern choice to break the deadlock at the Democratic convention of 1852 and was nominated on the 49th ballot. Pierce rolled up 254 electoral votes to 42 for Winfield Scott, the Whig candidate.

As President, Pierce followed a course of appeasing the South at home and of playing with schemes of territorial expansion abroad. The failure of both his foreign and domestic policies prevented his renomination; and he died in Concord, New Hampshire, on October 8, 1869, in relative ob-

scurity. A kindly and courteous person, Pierce was weak, unstable and lacking in presidential qualities. The standard biography is by Nichols.

### JAMES BUCHANAN

was born near Mercersburg, Pennsylvania, on April 23, 1791. A Dickinson graduate and a lawyer, he entered Pennsylvania politics as a Federalist. With the disappearance of the Federalist party, he became a Jacksonian Democrat. He served with ability in the House (1821-31), as minister to St. Petersburg (1832-33) and in the Senate (1834-45), and in 1845 became Polk's Secretary of State. Disappointed in the presidential nomination in 1852, Buchanan became minister to Britain in 1853 where he participated with other American diplomats in Europe in drafting the expansionist Ostend Manifesto.

In 1856 Buchanan received the Democratic nomination and won the election, gaining 174 electoral votes to 114 for John C. Frémont, the Republican candidate, and 8 for Millard Fillmore, American party. The growing crisis over slavery presented Buchanan with problems he lacked the will to tackle. His appeasement of the South alienated the Stephen Douglas wing of the Democratic party without reducing Southern militancy on slavery issues. While denying the right of secession, Buchanan also denied that the federal government could do anything about it. He supported the administration during the Civil War and died in Lancaster, Pennsylvania, on June 1, 1868.

The only President to remain a bachelor throughout his term, Buchanan used his charming niece Harriet Lane as White House hostess. Legalistic, indecisive and timorous as President, Buchanan filled his other public offices capably. The standard biography is by Curtis.

### ABRAHAM LINCOLN

was born in Hardin (now Larue) County, Kentucky, on February 12, 1809. His family moved to Indiana and then to Illinois, and Lincoln gained what education he could along the way. While reading law, he worked in a store, managed a mill, surveyed, and split rails. In 1834 he went to the state legislature as a Whig and became the party's floor leader. For the next twenty years he remained in law practice in Springfield, except for a single term (1847-49) in Congress where he denounced the Mexican War. In 1855 he was a candidate for senator and in 1856 he joined the new Republican party.

A leading but unsuccessful candidate for the vice-presidential nomination with Frémont, Lincoln gained national attention in 1858 when, as Republican candidate for

senator from Illinois, he engaged in a series of debates with Stephen A. Douglas, the Democratic candidate. He lost the senatorial election, but continued to prepare the way for the 1860 Republican convention and was rewarded with the presidential nomination on the third ballot. He polled 180 electoral votes, as against the 23 of his three opponents, but had only a plurality of the popular vote.

From the start, Lincoln made clear that, unlike Buchanan, he believed the national government had the power to crush the rebellion. Not an abolitionist, he held the slavery issue subordinate to that of preserving the Union but soon perceived that the war could not be brought to a successful conclusion without freeing the slaves. His administration was hampered by the incompetence of many Union generals, the inexperience of the troops and the harassing political tactics both of the Republican Radicals, who favored a hard policy toward the South, and the Democratic Copperheads, who desired a negotiated peace. The Gettysburg Address of November 19, 1863, marks the high point in the record of American eloquence. His patient search for a winning combination finally brought Generals Ulysses S. Grant and William T. Sherman to the top; and their series of victories in 1864 dispelled the mutterings from both Radicals and Peace Democrats which at one time seemed threaten Lincoln's re-election. He received 212 electoral votes to 21 for George B. McClellan, the Democratic candidate. His inaugural address urged leniency toward the South: "With malice toward none, with charity for all . . . let us strive to finish the work we are in; to bind up the nation's wounds . . ." This policy aroused growing opposition on the part of the Republican Radicals, but Lincoln was shot by John Wilkes Booth at Ford's Theatre, Washington, on April 14, 1865, before the matter could be put to test. He died the following day.

Lincoln's marriage to Mary Todd in 1842 was often unhappy and turbulent, in part because of his wife's pronounced instability. By his remarkable literary artistry, his essential patience and devotion, his profound sense of the importance of government by, for and of the people, by the manner of his life and of his death, Lincoln has won a unique place in the hearts of Americans. The standard biographies are by Sandburg, Herndon, Nicolay and Hay.

### ANDREW JOHNSON

was born at Raleigh, North Carolina, on December 29, 1808. Self-educated, he became a tailor in Greeneville, Tennessee, but soon went into politics where he rose steadily. From 1843 to 1853 he served in the House of Representatives, 1853-57 as governor of Tennessee and in 1857 was

elected Senator. Politically he was a Jacksonian Democrat, and his specialty was the fight for a more equitable land policy. Alone among the Southern Senators, he stood by the Union during the Civil War. In 1862 he became war governor of Tennessee and carried out a thankless and difficult job with great courage. Johnson became Lincoln's running mate in 1864 as result of an attempt to give the ticket a nonpartisan and nonsectional character. Succeeding to the presidency on Lincoln's death, Johnson sought to carry out his policy but without his political skill. The result was a hopeless conflict with the Radical Republicans who dominated Congress, passed measures over Johnson's vetoes and attempted to limit the power of the executive concerning appointments and removals. The conflict culminated with Johnson's impeachment for attempting to remove his disloyal Secretary of War in defiance of the Tenure of Office Act which required senatorial concurrence for such dismissals. The opposition failed by one vote to get the two-thirds necessary for conviction.

After his presidency, Johnson maintained an interest in politics and in 1875 was elected to the Senate. He died near Carter Station, Tennessee, on July 31, 1875. He married Eliza McCordle in 1827. An honest, courageous and intelligent man, Johnson lacked the tact, patience and self-control to be an effective President.

The standard biographies are by Winston, Stryker and Milton.

### ULYSSES SIMPSON GRANT

was born (as Hiram Ulysses Grant) at Point Pleasant, Ohio, on April 27, 1822. He finished West Point in 1843 and served without particular distinction in the Mexican War. In 1848 he married Julia Dent. He resigned from the army in 1854, following warnings from his commanding officer about his drinking habits, and for the next six years held a wide variety of jobs in the Middle West. With the outbreak of the Civil War, he sought a command and soon, to his surprise, was made a brigadier general. His continuing successes in the western theaters, culminating in the capture of Vicksburg in 1863, brought him national fame and soon the command of all the Union armies. His dogged, implacable policy of concentrating on dividing and destroying the Confederate armies brought the war to an end in 1865. In 1866 he was made full general.

Grant's relations with Johnson grew steadily worse; and in 1868, as the Republican candidate for President, Grant was elected with 214 electoral votes to 80 for the Democrat Horatio Seymour. From the start Grant showed his unfitness for the office. His cabinet was weak, his do-

mestic policy was confused, many of his intimate associates were corrupt. The notable achievement in foreign affairs was the settlement of controversies with Great Britain in the Treaty of London (1871), negotiated by his able Secretary of State, Hamilton Fish.

Nominated for a second term, he defeated Horace Greeley, the Democratic and Liberal Republican candidate, 286 votes to 63. The Panic of 1873 created difficulties for his second term.

After retiring from office, Grant toured Europe for two years and returned in time to accede to a third-term boom, but was beaten in the convention of 1880. Illness and bad business judgment darkened his last years, but he worked steadily at the *Personal Memoirs* which were to be so successful when published after his death at Mount McGregor, near Saratoga, New York, on July 23, 1885. Inarticulate, taciturn, loyal to his friends, he was an able general who should never have accepted the presidency. The standard biographies are by Hesselstine and Woodward.

### RUTHERFORD BIRCHARD HAYES

was born at Delaware, Ohio, on October 4, 1822. A graduate of Kenyon College and the Harvard Law School, he practiced law in Sandusky and then in Cincinnati, Ohio. In 1852 he married Lucy Webb. A Whig, he joined the Republican party in 1855. During the Civil War he rose to the rank of major general. He served in Congress from 1865 to 1867 and then confirmed a reputation for honesty and efficiency in two terms as governor of Ohio. His re-election as governor in 1875 made him the logical candidate for those Republicans who wished to stop James G. Blaine in 1876, and he was successfully nominated.

The result of the election was for some time in doubt and hinged upon disputed returns from South Carolina, Louisiana, Florida and Oregon. Samuel J. Tilden, the Democratic candidate, had the larger popular vote but was adjudged by the strictly partisan decisions of the Electoral Commission to have one less electoral vote, 185 to 184. The national acceptance of this result was due in part to the general understanding that Hayes would pursue a conciliatory policy toward the South. He withdrew the troops from the South, took a conservative position on financial and labor issues and urged civil service reform.

Hayes served only one term by his own wish and spent the rest of his life in various humanitarian endeavors. He died in Fremont, Ohio, on January 17, 1893. A hard-working, conscientious, sensible man, Hayes represented the best type of Republican of his day. The standard biographies are by Eckenrode and Williams.

### JAMES ABRAM GARFIELD

the last President to be born in a log cabin, was born at Cuyahoga County, Ohio, on November 19, 1831. A Williams graduate, he taught school for a time and entered Republican politics in Ohio. In 1858 he married Lucretia Rudolph. During the Civil War he had a promising career, rising to the rank of major general of volunteers, but in 1863 he was elected to the House of Representatives where he served until 1880. His oratorical and parliamentary abilities soon made him the leading Republican in the House, though his record was marred by his unorthodox acceptance of a fee in the DeGolyer paving contract case and by suspicions of his complicity in the Cr dit Mobilier scandal.

In 1880 Garfield was elected to the Senate, but instead became the presidential candidate on the 36th ballot as a result of a deadlock in the Republican convention. He gained 214 electoral votes to 154 for General Winfield Scott Hancock, the Democratic candidate. Garfield's administration was barely under way when he was shot by Charles J. Guiteau, a disappointed office seeker, in July. He died in Elberon, New Jersey, on September 19, 1881. An attractive and eloquent man, he was much beloved in his day.

The standard biographies are by Smith and Caldwell.

### CHESTER ALAN ARTHUR

was born at Fairfield, Vermont, on October 5, 1830. A graduate of Union College, he became a successful New York lawyer. In 1859 he married Ellen Herndon. During the Civil War he held administrative jobs in the Republican state administration and in 1871 was appointed collector of the Port of New York by Grant. This post gave him control over considerable patronage and, though not personally corrupt, Arthur managed his power in the interests of the New York machine so openly that President Hayes in 1877 called for an investigation, and in 1878 Arthur was suspended from his responsibilities.

In 1880 Arthur was nominated for Vice President in the hope of conciliating the followers of Grant and the powerful New York machine. As President on Garfield's assassination, Arthur, stepping out of his familiar role as spoilsman, backed civil service reform, reorganized the cabinet and prosecuted political associates accused of post office graft. Losing machine support and failing to gain the reformers, he was not renominated. He died in New York City on November 18, 1886. A tall, handsome, dignified man with real administrative abilities, he was a better President than his previous record promised. The standard biography is by Howe.



## STEPHEN GROVER CLEVELAND

was born at Caldwell, New Jersey, on March 18, 1837. He was admitted to the bar in Buffalo, New York, in 1859 and lived there as a lawyer, with occasional incursions into Democratic politics, for more than twenty years. He did not participate in the Civil War. As mayor of Buffalo in 1881, he carried through a reform program so ably that the Democrats ran him successfully for governor in 1882. In 1884 he won the Democratic nomination for President. The campaign contrasted Cleveland's spotless public career with the uncertain record of James G. Blaine, the Republican candidate, and Cleveland received enough Mugwump (Independent Republican) support to win by 219 to 182 electoral votes.

As President, Cleveland pushed civil service reform, opposed the pension grab and attacked the high tariff rates. While in the White House he married Frances Folsom (1886). Renominated in 1888, Cleveland was defeated by Benjamin Harrison, polling more popular but fewer electoral votes. In 1892 he was re-elected over Harrison, 277 to 145, with 22 votes for James B. Weaver, the Populist candidate. When the Panic of 1893 burst upon the country, Cleveland's attempts to solve it by sound-money measures alienated the free-silver wing of the party, while his tariff policy alienated the protectionists. In 1894 he sent troops to break the Pullman strike. In foreign affairs his firmness caused Great Britain to back down in the Venezuela border dispute.

In his last years Cleveland was an active and much respected public figure. He died in Princeton, New Jersey, on June 24, 1908. An honest, stubborn, high-principled man, Cleveland was an old-fashioned liberal in the nineteenth-century sense who was baffled by the new problems of industrial society. The standard biographies are by Nevins and McElroy.

## BENJAMIN HARRISON

was born in North Bend, Ohio, on August 20, 1833, the grandson of William Henry Harrison. A graduate of Miami University, he took up the law in Indiana and became active in Republican politics. In 1853 he married Caroline Lavinia Scott. During the Civil War he rose to the rank of brigadier general. A sound-money Republican, he was elected senator from Indiana in 1880 and in 1888 received the Republican nomination for President on the 8th ballot. Though behind on the popular vote, he won over Grover Cleveland in the electoral college by 233 to 168.

As President, Benjamin Harrison failed to please either the bosses or the reform element in the party. In foreign affairs he backed Secretary of State Blaine whose policy foreshadowed later American im-

perialism. In 1892 Harrison was renominated, but Cleveland beat him in the election. His wife died in the White House in 1892, and Harrison married her niece, Mary Scott (Lord) Dimmick, in 1896. After his presidency, he resumed law practice. He died in Indianapolis, Indiana, on March 13, 1901. Harrison was an honest man of very medium abilities.

## WILLIAM MCKINLEY

was born in Niles, Ohio, on January 29, 1843. A graduate of Allegheny College, he rose from the ranks to become a major in the Civil War. Subsequently he opened a law office in Canton, Ohio, and in 1871 married Ida Saxton. Elected to Congress in 1876, he served there steadily till 1891 except for 1883-85. His faithful advocacy of business interests culminated in the passage of the highly protective McKinley Tariff of 1890. With the support of Mark Hanna, a shrewd Cleveland businessman interested in safeguarding tariff protection, McKinley became governor of Ohio in 1892 and Republican presidential candidate in 1896. The business community, alarmed by the progressivism of William Jennings Bryan, the Democratic candidate, spent considerable money to assure McKinley's victory which was by the margin of 271 to 176 in the electoral college.

The chief event of McKinley's administration was the war with Spain which resulted in our acquisition of the Philippines and other islands. With imperialism as an issue, McKinley defeated Bryan again in the election of 1900 by 292 to 155. On September 6, 1901, he was shot at Buffalo by Leon F. Czolgosz, an anarchist, and he died there on September 14.

The standard biography is by Olcott.

## THEODORE ROOSEVELT

was born in New York City on October 27, 1858. A Harvard graduate, he was early interested in ranching, in politics and in writing picturesque historical narratives. He was a Republican member of the New York Assembly in 1882-84, an unsuccessful candidate for mayor of New York in 1886, a U. S. Civil Service Commissioner under Harrison, Police Commissioner of New York City in 1895 and Assistant Secretary of the Navy under McKinley in 1897. After exuding a belligerence which helped bring on the war with Spain, he resigned in 1898 to help organize a volunteer regiment named the Rough Riders and take a more direct part in the war. Always publicity-shrewd, he won the New York gubernatorial nomination in 1898 in spite of pronounced lack of enthusiasm on the part of the bosses.

After two years of T.R. in Albany, the New York bosses succeeded in getting him the vice-presidential nomination in 1900.

Roosevelt accepted it with reluctance, feeling that his career had been ruined. As President on McKinley's assassination, he perceived the new popular mood of progressivism and initiated a policy of trust busting, designed to control giant corporations. He also strengthened government powers over interstate commerce and launched a conservation program to save natural resources. In foreign affairs he pursued a truculent policy, permitting the instigation of a revolt in Panamá to dispose of Colombian objections to the Panama Canal and helping to maintain the balance of power in the East by bringing the Russo-Japanese war to an end. In 1904 he decisively defeated Alton B. Parker, his conservative Democratic opponent, by an electoral margin of 336 to 140.

Following his second term he went big-game hunting in Africa and toured Europe. On his return to the United States, his increasing coldness toward Taft led him to overlook his earlier disclaimer of third-term ambitions and to re-enter politics. Defeated by the machine in the Republican convention of 1912, he organized the Progressive party and polled more votes than Taft, though the split brought about the election of Wilson. From 1915 on, Roosevelt strongly favored intervention in the European war. He became deeply embittered at Wilson's refusal to allow him to raise a volunteer division. He died in Oyster Bay, New York, on January 6, 1919. He was married twice: in 1880 to Alice Hathaway Lee, who died in 1884; and in 1886 to Edith Kermit Carow.

The athletic advocate of the strenuous life, with his high voice, prominent teeth and thick glasses, Roosevelt captured the imagination of the American people. He was one of the great personalities of American history. The standard biography is by Pringle.

### WILLIAM HOWARD TAFT

was born in Cincinnati, Ohio, on September 15, 1857. A Yale graduate, he entered Ohio Republican politics in the eighteen eighties. In 1886 he married Helen Herron. From 1887 to 1890, he served on the Ohio superior court; 1890-92, as solicitor general of the United States; 1892-1900, on the federal circuit court. In 1900 McKinley appointed him president of the Philippine Commission and in 1901 governor general. Taft had great success in pacifying the Filipinos, solving the problem of the church lands, improving economic conditions and establishing limited self-government. His period as Secretary of War 1904-08 further demonstrated his capacity as administrator and conciliator; and he was Roosevelt's hand-picked successor in 1908.

In the election he polled 321 electoral votes to 162 for William Jennings Bryan.

As President, though he carried on many of Roosevelt's policies, Taft got into increasing trouble with the progressive wing of the party and displayed mounting irritability and indecision. After his defeat in 1912, he became professor of constitutional law at Yale. In 1921 he was appointed Chief Justice of the United States. He died in Washington on March 8, 1930. Enormously large, deliberate and good-humored, Taft excelled as an administrator and judge, not as a political leader.

The standard biography is by Pringle.

### THOMAS WOODROW WILSON

was born in Staunton, Virginia, on December 28, 1856. A Princeton graduate, he turned from law practice to post-graduate work in political science at Johns Hopkins University, receiving his Ph.D. in 1886. He taught at Bryn Mawr, Wesleyan and Princeton, and in 1902 was made president of Princeton. After an unsuccessful attempt to democratize the social life of Princeton, he welcomed an invitation in 1910 to be the Democratic gubernatorial candidate in New Jersey. His success in fighting the machine and putting through a reform program attracted national attention.

In 1912, after a protracted contest at Baltimore, Wilson won the Democratic nomination on the 46th ballot. In the election he received 435 electoral votes to 88 for Roosevelt and 8 for Taft. During his first term Wilson proceeded under the standard of the New Freedom to enact a program of domestic reform, including the Federal Reserve Act, the Clayton Antitrust Act, the establishment of the Federal Trade Commission and other measures designed to restore competition in the face of the great monopolies. In foreign affairs, while privately sympathetic with the Allies, he strove to maintain strict neutrality in the European war and warned both sides against encroachments on American interests.

Re-elected in 1916 as a peace candidate, he tried to mediate between the warring nations; but, when the Germans resumed unrestricted submarine warfare in 1917, Wilson brought the United States into what he now believed was a war to make the world safe for democracy. He supplied the classic formulations of Allied war aims; and the armistice of November, 1918, was negotiated on the basis of Wilson's Fourteen Points. In 1919 he strove at Versailles to lay the foundations for enduring peace. He accepted the imperfections of the Versailles Treaty in the expectation that they could be remedied by action within the

League of Nations. He probably could have secured ratification of the treaty if he had adopted a more conciliatory attitude toward the mild reservationists; but his insistence on all or nothing eventually caused the diehard isolationists and diehard Wilsonites to unite in rejecting a compromise.

In September, 1919, Wilson suffered a paralytic stroke which limited his future activity. After the presidency he lived on in retirement in Washington, dying February 3, 1924. He was married twice—in 1885 to Ellen Louise Axson, who died in 1914, and in 1915 to Edith Bolling Galt. A man of high principle, inspiring eloquence and great intellectual ability, Wilson was the first leader to fire the imagination of the masses of the world with the vision of world peace. The standard biography is by Baker.

### WARREN GAMALIEL HARDING

was born in Morrow County, Ohio, on November 2, 1865. After attending Ohio Central College, Harding became interested in journalism and in 1884 bought the *Marion* (Ohio) *Star*. In 1891 he married a wealthy widow, Florence Kling De Wolfe. As his paper prospered, he entered Republican politics, serving as state senator (1899–1903), and as lieutenant governor (1904–06). In 1910 he was defeated for governor but in 1914 was elected to the Senate. His reputation as orator made him keynoter in the 1916 convention.

When the 1920 Republican convention was deadlocked between Leonard Wood and Frank O. Lowden, Harding was made the dark-horse nominee on his solemn affirmation that there was no reason in his past that he should not be. Straddling the League question, Harding was elected easily, with 404 electoral votes to 127 for James M. Cox, his Democratic opponent. His cabinet contained some able men, but also some manifestly unfit for public office. Harding's own intimates were mediocre when they were not corrupt. The impending disclosure of scandals in the Interior and Justice departments and in the Veterans' Bureau, as well as political setbacks, profoundly worried him. On his return from Alaska in 1923, he died suddenly at San Francisco on August 2. A handsome and genial man, undiscriminating in his associates, lacking in political ideas or fortitude, Harding was totally unfitted for the presidency.

### JOHN CALVIN COOLIDGE

was born in Plymouth, Vermont, on July 4, 1872. An Amherst graduate, he went into law practice at Northampton, Massachusetts, in 1897. He married Grace Anna Goodhue in 1905. He entered Republican

state politics, becoming successively mayor of Northampton, state senator, lieutenant governor and, in 1919, governor. His conduct in regard to the Boston police strike in 1919 won him a somewhat undeserved reputation for decisive action and brought him the Republican vice-presidential nomination in 1920. After Harding's death Coolidge handled the Washington scandals with care and finally managed to save the Republican party from public blame for the widespread corruption.

In 1924 Coolidge won re-election without difficulty, getting 382 electoral votes to 136 for the Democrat, John W. Davis, and 13 for Robert M. La Follette running on the Progressive ticket. His second term, like his first, was characterized by a general satisfaction with the existing economic order. He stated that he did not choose to run in 1928.

After his presidency, Coolidge lived quietly in Northampton, writing an unilluminating *Autobiography* and conducting a syndicated column. He died in Northampton, Massachusetts, on January 5, 1933. His dry, Yankee humor, his frugality and glumness made him a paradoxically popular President in the boom period. The standard biographies are by White and Fuess.

### HERBERT CLARK HOOVER

was born at West Branch, Iowa, an August 10, 1874. A Stanford graduate, he worked from 1895 to 1913 as a mining engineer and consultant in North America, Europe, Asia, Africa and Australia. In 1899 he married Lou Henry. During the First World War he served with distinction as chairman of the American Relief Committee in London, as chairman of the Commission for Relief in Belgium and as United States Food Administrator. His political affiliations were still sufficiently indeterminate for him to be mentioned as a possibility for both Republican and Democratic nominations in 1920; but after the election he served both Harding and Coolidge as Secretary of Commerce.

In the election of 1928 Hoover received 444 electoral votes to 87 for Alfred E. Smith, the Democratic candidate. He soon faced the worst depression in the nation's history; but his attacks upon it were hampered by his devotion to the theory that the forces which brought the crisis would soon bring the revival, and then by his belief that in too many areas the federal government had no power to act. In a succession of vetoes he struck down measures proposing a national employment system or national relief; he reduced income tax rates; and only at the end of his term did he yield to popular pressure and set up agencies such as the Reconstruction Finance Corporation to make emergency loans to assist business.



After his 1932 defeat, Hoover returned to private business. In 1946, President Truman charged him with various world food missions; and from 1947 to 1949 and again from 1953 to 1955, he was head of the Commission on Organization of the Executive Branch of the Government.

### FRANKLIN DELANO ROOSEVELT

was born in Hyde Park, New York, on January 30, 1882. A Harvard graduate, he attended Columbia Law School and was admitted to the New York bar. In 1910 he was elected to the New York state senate as a Democrat. Re-elected in 1912, he was appointed Assistant Secretary of the Navy by Woodrow Wilson in 1913. In 1920 his radiant personality and his war services resulted in his nomination for Vice President as James M. Cox's running mate. After his defeat, he returned to law practice in New York. In August, 1921, Roosevelt was stricken with infantile paralysis while at Campobello, New Brunswick. After a long and gallant fight against the disease he recovered partial use of his legs. In 1924 and 1928 he led the fight at the Democratic national conventions for the nomination of Governor Alfred E. Smith of New York; and in 1928 Roosevelt was himself induced to run for governor of New York. He was elected and was re-elected in 1930.

In 1932 Roosevelt received the Democratic nomination for President and immediately launched a campaign which brought new spirit to a weary and discouraged nation. He won the election over Herbert Hoover by a margin of 472 to 59 in the electoral college. His first term was characterized by an unfolding of the New Deal program, with greater benefits for labor, the farmers and the unemployed, and the progressive estrangement of most of the business community.

At an early stage Roosevelt became aware of the menace to world peace involved in the existence of totalitarian fascism, and from 1937 on he tried to focus public attention on the trend of events in Europe and Asia. As a result he was widely denounced as a warmonger. He was re-elected in 1936 over Alfred M. Landon by the overwhelming electoral margin of 523 to 8; and the gathering international crisis caused him to decide to run again in 1940. He defeated Wendell L. Willkie by a vote of 449 to 82.

Roosevelt's program to bring maximum aid to Britain and, after June, 1941, to Russia was opposed, until the Japanese attack on Pearl Harbor restored national unity. During the war Roosevelt shelved the New Deal in the interests of conciliating the business community, both in order to get full production during the war and to prepare the way for a united

acceptance of the peace settlements after the war. A series of conferences with Winston Churchill and Joseph Stalin laid down the bases for the postwar world. In 1944 he was elected to a fourth term, running against Governor Thomas E. Dewey of New York.

On April 12, 1945, Roosevelt died at Warm Springs, Georgia, shortly after his return from the Yalta Conference. His wife, Anna Eleanor Roosevelt, whom he married in 1905, is a woman of great ability who made significant contributions to her husband's policies. No President has been faced with so many staggering responsibilities, both at home and abroad.

### HARRY S. TRUMAN

was born on a farm near Lamar, Missouri, on May 8, 1884. During the First World War he served in France with the 129th Field Artillery. After engaging briefly and unsuccessfully in the haberdashery business in Kansas City, Truman entered local politics. Under the sponsorship of Thomas Pendergast, Democratic boss of Missouri, he held a number of local offices, preserving his personal honesty in the midst of a notoriously corrupt political machine. In 1934 he was elected to the Senate and was re-elected in 1940. During his first term he was a loyal but quiet supporter of the New Deal; but in the course of his second term, an appointment as head of a Senate committee to investigate war production brought out his special qualities of honesty, common sense and hard work, and he won widespread respect.

Elected Vice President in 1944, Truman became President upon Roosevelt's death in 1945 and immediately had to face complex postwar problems, both domestic and foreign. His first attempts did not meet with marked success, and the Republicans won control of Congress in 1946. The next two years were distinguished by the Truman Doctrine, the Marshall Plan and civil-rights proposals; and his general record, highlighted by a vigorous Fair Deal campaign, brought about his unexpected and impressive re-election in 1948.

Truman's second term was primarily concerned with the Cold War with the Soviet Union, the implementing of the North Atlantic Pact, the United Nations police action in Korea, and the vast rearmament program with its accompanying problems of economic stabilization.

On Mar. 29, 1952, Truman announced that he would not run again for the Presidency. He campaigned actively for Adlai E. Stevenson. After Eisenhower's inauguration, Truman returned to his Independence, Missouri, home to write his memoirs. He further busied himself with the organization of the Harry S. Truman Library in Independence, Missouri.

## DWIGHT DAVID EISENHOWER

was born in Denison, Texas, on October 14, 1890. His ancestors lived in Germany, and emigrated to America, settling in Pennsylvania, early in the 18th century. His father, David, had a general store in Hope, Kansas, which failed. After a brief time in Texas, the family moved to Abilene, Kansas.

After graduating from Abilene High School in 1909, Dwight Eisenhower did odd jobs for almost two years. He won an appointment to the Naval Academy at Annapolis, but it turned out that he was too old for admittance. Then he received an appointment in 1910 to West Point. He was graduated a 2nd lieutenant in 1915.

He did not see service in World War I, having been assigned to the 19th Infantry at Fort Sam Houston, Texas. There he met Mamie Geneva Doud, whom he married in Denver on July 1, 1916. Their first son died in infancy. Their second son is Major John Sheldon Doud Eisenhower.

A paper he wrote about 1930 attracted the attention of General Douglas MacArthur, then Chief of Staff, who asked that Eisenhower be assigned to his office. When MacArthur went to the Philippines as military adviser in 1935, Eisenhower accompanied him and remained with him until 1939.

General George C. Marshall brought him into the War Department General Staff

For later information, see Headline Stories of 1956 and Elections of 1956.

and, in 1942, put him in command of the Allied invasion of North Africa. In 1944, Eisenhower was made Supreme Allied Commander of the invasion of Europe.

After the war, Eisenhower served as Army Chief of Staff from November 1945 until February 1948, when he was appointed president of Columbia University.

In December 1950, President Truman recalled Eisenhower to active duty to command the North Atlantic Treaty Organization forces in Europe. He held this post until the end of May 1952.

In the Republican Convention of July 1952 in Chicago, Eisenhower won the Presidential nomination on the first ballot in a close race with Senator Robert A. Taft of Ohio. In November, he won the election, defeating Adlai E. Stevenson by an electoral vote of 442 to 89.

Eisenhower's Administration from 1952 to the fall of 1956 was marked by alternating periods of tension and relaxation in foreign affairs. On the home front, following a middle-of-the-road line, he did little to abandon the social policies of the New Deal-Fair Deal, but he sought wider state participation and the assumption of a larger responsibility by business for investment and employment. His illnesses in Sept. 1955 and June 1956 raised the question of his availability for a second term. He announced his candidacy on July 10, and was renominated.

## How to Number the Presidents

Did Eisenhower take office as the 33rd President or as the 34th?

The difficulty started with Grover Cleveland. He became our 22nd President back in 1885. Then came Benjamin Harrison, who was obviously the 23rd President, serving from 1889-93. At this point, Cleveland returned to the White House for a second (but nonconsecutive) term.

Cleveland was still the same man who had been our 22nd President. But in his later term, it would look silly—some folks thought—to continue to call him our 22nd President. That would make the 22nd President follow the 23rd. Numbers should go in order—so ran the argument—and Cleveland should therefore be designated both as the 22nd President in his first term and as the 24th in his second term.

The people who argued the other way found an eloquent spokesman in John Kieran. He said: "Write down the names of all the Presidents, and you will only get 33. If you write Cleveland twice, you'll get 34—but in that case you've got to write Franklin D. Roosevelt's name four times. Until they prove to me that Grover Cleveland was two men, Eisenhower can't be the 34th President."

*The Congressional Directory*, which must be considered the official final authority, grappled with the problem of numbering the Presidents. Until recent years, it has followed John Kieran's theory: it listed Cleveland as the 22nd President, but not as the 24th. No number was given to his second term. On that reckoning, Harry S. Truman was inaugurated, according to the *Congressional Directory*, the 32nd President in 1949. Cautiously, the *Directory* printed: "NOTE: The figures indicate the number of persons who have served as President. . . ."

After the election of President Truman, and before the election of President Eisenhower, the *Congressional Directory* changed its official mind. In the current issue, Truman is the 33rd President, and Eisenhower is listed as the 34th. (Cleveland has two numbers—22nd and 24th.)

In conformity with officialdom, the *Information Please Almanac* is now recording the numbers of the Presidents in the same manner as the *Congressional Directory*. But we can't help thinking of John Kieran's remark: "Put the busts of all the Presidents in a row and count them and you'll get 33 and only 33."

## Presidents and Vice Presidents of the U. S.

Presidents & (parties)	Born	State of birth	Religion	Died	Term	Age at inaug.	Age at death	Vice Presidents <sup>a</sup>	State of birth
1. Washington (F) <sup>3</sup>	Feb. 22, 1732	Va.	Episcopalian	Dec. 14, 1799	1789-1797	57	67	1. John Adams	Mass.
2. J. Adams (F)	Oct. 30, 1735	Mass.	Unitarian	July 4, 1826	1797-1801	61	90	2. Thomas Jefferson <sup>4</sup>	Va.
3. Jefferson (DR)	Apr. 13, 1743	Va.	Deist	July 4, 1826	1801-1809	57	83	3. Aaron Burr	N. J.
4. Madison (DR)	Mar. 16, 1751	Va.	Episcopalian	June 28, 1836	1809-1817	57	85	4. George Clinton	N. Y.
5. Monroe (DR)	Apr. 28, 1758	Va.	Episcopalian	July 4, 1831	1817-1825	58	73	5. Elbridge Gerry	Mass.
6. J. Q. Adams (DR)	July 11, 1767	Mass.	Unitarian	Feb. 23, 1848	1825-1829	57	80	6. Daniel D. Tompkins	N. Y.
7. Jackson (D)	Mar. 15, 1767	S. C.	Presbyterian	June 8, 1845	1829-1837	61	78	7. John C. Calhoun	S. C.
8. Van Buren (D)	Dec. 5, 1782	N. Y.	Reformed Dutch	July 24, 1862	1837-1841	54	79	8. Martin Van Buren	N. Y.
9. W. H. Harrison (W) <sup>8</sup>	Feb. 9, 1773	Va.	Episcopalian	Apr. 4, 1841	1841-1841	68	68	9. Richard M. Johnson	Ky.
10. Tyler (W)	Mar. 29, 1790	Va.	Episcopalian	Jan. 18, 1862	1841-1845	51	71	10. John Tyler	Va.
11. Polk (D)	Nov. 2, 1795	N. C.	Methodist	June 15, 1849	1845-1849	49	53	11. George M. Dallas	Pa.
12. Taylor (W) <sup>9</sup>	Nov. 24, 1784	Va.	Episcopalian	July 9, 1850	1849-1850	64	65	12. Millard Fillmore	N. Y.
13. Fillmore (W)	Jan. 7, 1800	N. Y.	Episcopalian	Mar. 8, 1874	1850-1853	50	74	13. William R. King <sup>2</sup>	N. C.
14. Pierce (D)	Nov. 23, 1804	N. H.	Episcopalian	Oct. 8, 1869	1853-1857	48	64	14. John C. Breckinridge	Ky.
15. Buchanan (D)	Apr. 23, 1791	Pa.	Presbyterian	June 1, 1868	1857-1861	65	77	15. Hannibal Hamlin	Maine
16. Lincoln (R) <sup>10</sup>	Feb. 12, 1809	Ky.	Liberal	Apr. 15, 1865	1861-1865	52	56	16. Andrew Johnson <sup>17</sup>	N. C.
17. Johnson (U) <sup>17</sup>	Dec. 29, 1808	N. C.	( <sup>15</sup> )	July 31, 1875	1865-1869	56	66	17. Schuyler Colfax	N. Y.
18. Grant (R)	Apr. 27, 1822	Ohio	Methodist	July 23, 1885	1869-1877	46	63	18. Henry Wilson <sup>11</sup>	N. H.
19. Hayes (R)	Oct. 4, 1822	Ohio	Methodist	Jan. 17, 1893	1877-1881	54	70	19. William A. Wheeler	N. Y.
20. Garfield (R) <sup>12</sup>	Nov. 19, 1831	Ohio	Disciples of Christ	Sept. 19, 1881	1881-1881	49	49	20. Chester A. Arthur	Vt.
21. Arthur (R)	Oct. 5, 1830	Vt.	Episcopalian	Nov. 18, 1886	1881-1885	50	56	21. Thomas A. Hendricks <sup>13</sup>	Ohio
22. Cleveland (D)	Mar. 18, 1837	N. J.	Presbyterian	June 24, 1908	1885-1889	47	71	22. Levi P. Morton	Vt.
23. B. Harrison (R)	Aug. 20, 1833	Ohio	Presbyterian	Mar. 13, 1901	1889-1893	55	67	23. Adlai E. Stevenson	Ky.
24. Cleveland (D)	Jan. 29, 1843	Ohio	Methodist	Sept. 14, 1901	1893-1897	54	58	24. Garret A. Hobart <sup>15</sup>	N. J.
25. McKinley (R) <sup>14</sup>	Oct. 27, 1858	N. Y.	Reformed Dutch	Jan. 6, 1919	1897-1901	42	60	25. Theodore Roosevelt	N. Y.
26. T. Roosevelt (R)	Sept. 15, 1857	Ohio	Unitarian	Mar. 8, 1930	1901-1909	51	60	26. Charles W. Fairbanks	Ohio
27. Taft (R)	Dec. 28, 1856	Va.	Presbyterian	Feb. 3, 1924	1909-1913	51	72	27. James S. Sherman <sup>16</sup>	N. Y.
28. Wilson (D)	Nov. 2, 1865	Ohio	Baptist	Aug. 2, 1923	1913-1921	56	67	28. Thomas R. Marshall	Ind.
29. Harding (R) <sup>18</sup>	July 4, 1872	Vt.	Congregationalist	Jan. 5, 1933	1921-1923	55	57	29. Calvin Coolidge	Vt.
30. Coolidge (R)	Aug. 10, 1874	Iowa	Quaker	Jan. 5, 1933	1923-1929	51	60	30. Charles G. Dawes	Ohio
31. Hoover (R)	Jan. 30, 1882	N. Y.	Episcopalian	Apr. 12, 1945	1929-1933	54	63	31. Charles Curtis	Kans.
32. F. D. Roosevelt (D) <sup>18</sup>	May 8, 1884	Mo.	Baptist	.....	1933-1945	51	63	32. John N. Garner	Tex.
33. Truman (D)	Oct. 14, 1890	Tex.	Presbyterian	.....	1945-1953	60	60	33. Henry A. Wallace	Iowa
34. Eisenhower (R)	.....	.....	.....	.....	1953-.....	62	.....	34. Harry S. Truman	Mo.
.....	.....	.....	.....	.....	.....	.....	.....	35. Alben W. Barkley	Ky.
.....	.....	.....	.....	.....	.....	.....	.....	36. Richard M. Nixon	Calif.



# Wives and Children of the Presidents of the United States

President	Wife's name	Year and place of wife's birth	Married	Wife Died	Children of President*	
					Sons	Daughters
Washington	Mrs. Martha Dandridge Custis	1732, Va.	1759	1802	..	..
John Adams	Abigail Smith	1744, Mass.	1764	1818	3	2
Jefferson	Mrs. Martha Wayles Skelton	1748, Va.	1772	1782	1	5
Madison	Mrs. Dorothy "Dolly" Payne Todd	1772, N. C.	1794	1849	..	..
Monroe	Eliza Kortright	1768, N. Y.	1786	1830	..	2
J. Q. Adams	Louisa Catherine Johnson	1775, England	1797	1852	3	1
Jackson	Mrs. Rachel Donelson Robards	1767, Va.	1791	1828	..	..
Van Buren	Hannah Hoes	1783, N. Y.	1807	1819	4	..
W. H. Harrison	Anna Symmes	1775, N. J.	1795	1864	6	4
Tyler	Letitia Christian	1790, Va.	1813	1842	3	4
	Julia Gardiner	1820, N. Y.	1844	1889	5	2
Polk	Sarah Childress	1803, Tenn.	1824	1891	..	..
Taylor	Margaret Smith	1788, Md.	1810	1852	1	5
Fillmore	Abigail Powers	1798, N. Y.	1826	1853	1	1
	Mrs. Caroline Carmichael McIntosh	1813, N. J.	1858	1881	..	..
Pierce	Jane Means Appleton	1806, N. H.	1834	1863	3	..
Buchanan	(Unmarried)	....	....	....	..	..
Lincoln	Mary Todd	1818, Ky.	1842	1882	4	..
Johnson	Eliza McCordle	1810, Tenn.	1827	1876	3	2
Grant	Julia Dent	1826, Mo.	1848	1902	3	1
Hayes	Lucy Ware Webb	1831, Ohio	1852	1889	7	1
Garfield	Lucretia Rudolph	1832, Ohio	1858	1918	5	2
Arthur	Ellen Lewis Herndon	1837, Va.	1859	1880	2	1
Cleveland	Frances Folsom	1864, N. Y.	1886	1947	2	3
B. Harrison	Caroline Lavinia Scott	1832, Ohio	1853	1892	1	1
	Mrs. Mary Scott Lord Dimmick	1858, Pa.	1896	1948	..	1
McKinley	Ida Saxton	1847, Ohio	1871	1907	..	2
T. Roosevelt	Alice Hathaway Lee	1861, Mass.	1880	1884	..	1
	Edith Kermit Carow	1861, Conn.	1886	1948	4	1
Taft	Helen Herron	1861, Ohio	1886	1943	2	1
Wilson	Ellen Louise Axson	1860, Ga.	1885	1914	..	3
	Mrs. Edith Bolling Galt	1872, Va.	1915	....	..	..
Harding	Mrs. Florence Kling DeWolfe	1860, Ohio	1891	1924	..	..
Coolidge	Grace Anna Goodhue	1879, Vt.	1905	....	2	..
Hoover	Lou Henry	1875, Iowa	1899	1944	2	..
F. D. Roosevelt	Anna Eleanor Roosevelt	1884, N. Y.	1905	....	5	1
Truman	Bess Wallace	1885, Mo.	1919	....	..	1
Eisenhower	Mamie Geneva Doud	1896, Iowa	1916	....	2	..

\* Includes children who died in infancy.

## Annual Salaries of Federal Officials

President of the U. S. ....	\$100,000 <sup>1</sup>	Secretaries of the Army, Navy, Air Force. ....	18,000
Vice President of the U. S. ....	35,000 <sup>2</sup>	Senators and Representatives. ....	22,500
Cabinet members. ....	25,000	Speaker of the House. ....	35,000 <sup>2</sup>
Undersecretaries of executive departments. ....	17,500	Chief Justice of the Supreme Court. ....	35,500
Deputy Secretary of Defense. ....	20,000	Associate Justices of the Supreme Court. ....	35,000

<sup>1</sup> Plus taxable \$50,000 for expenses and a nontaxable sum (not to exceed \$40,000 a year) for traveling and official entertainment expenses. <sup>2</sup> Plus nontaxable \$10,000 for expenses. NOTE: All salaries shown above are taxable.

## Footnotes for Table on Preceding Page

<sup>1</sup> F—Federalist; DR—Democratic-Republican; D—Democratic; W—Whig; R—Republican; U—Union. <sup>2</sup> Same party as President, except as indicated. <sup>3</sup> No party for first election. The party system in the U. S. made its appearance during Washington's first term. <sup>4</sup> Democratic-Republican. <sup>5</sup> Died in office Apr. 20, 1812. <sup>6</sup> Died in office Nov. 23, 1814. <sup>7</sup> Resigned Dec. 28, 1832, to become U. S. Senator. <sup>8</sup> Died in office. <sup>9</sup> Died in office Apr. 18, 1853. <sup>10</sup> Died in office (shot Apr. 14 by John Wilkes Booth). <sup>11</sup> Died in office Nov. 22, 1875. <sup>12</sup> Died in office (shot July 2 by Charles J. Guiteau). <sup>13</sup> Died in office Nov. 25, 1885. <sup>14</sup> Died in office (shot Sept. 6 by Leon F. Czolgosz). <sup>15</sup> Died in office Nov. 21, 1899. <sup>16</sup> Died in office Oct. 30, 1912. <sup>17</sup> The Republican National Convention of 1864 adopted the name Union party. It renominated Lincoln for President; for Vice President it nominated Johnson, a War Democrat. Although frequently listed as a Republican Vice President and President, Johnson undoubtedly considered himself strictly a member of the Union party. When that party broke apart after 1868, he returned to the Democratic party. <sup>18</sup> Johnson was not a professed church member; however, he admired the Baptist principles of church government.

## Executive Departments and Agencies

Source: U.S. Government Manual

(Unless otherwise indicated, addresses shown are in Washington, D.C.; officials listed are as of July 1956.)

### Executive Office of the President

#### THE WHITE HOUSE OFFICE

1600 Pennsylvania Ave., NW.

*The Assistant to the President:* Sherman Adams.

*The Deputy Assistant to the President:* Wilton B. Persons.

*Secretary to the President:* Bernard M. Shanley.

*Press Secretary to the President:* James C. Hagerty.

*Special Counsel to the President:* Gerald D. Morgan.

*Activities:* Serves President in performance of activities incident to his office.

#### BUREAU OF THE BUDGET

Executive Office Bldg.

*Established:* June 10, 1921.

*Director:* Percival F. Brundage.

*Activities:* Assists President in preparing budget and formulating fiscal program; supervises administration of budget; coordinates advice on proposed legislation; plans improvements in statistical services; keeps President informed of progress of activities by government agencies so that Congressional appropriations are spent most economically.

#### NATIONAL SECURITY COUNCIL (NSC)

Executive Office Bldg.

*Members:* 6. *Established:* July 26, 1947.

*Chairman:* Dwight D. Eisenhower, President of the U. S.

*Other members:* Richard M. Nixon, Vice President of the U. S.; John Foster Dulles, Secretary of State; Charles E. Wilson, Secretary of Defense; Arthur S. Flemming, Director of Office of Defense Mobilization.

*Director of Central Intelligence Agency:* Allen W. Dulles.

*Chairman of Operations Coordinating Board:* Herbert Hoover, Jr.

*Activities:* Assesses and appraises objectives, commitments and risks of U. S. in relation to our actual and potential military power in interests of national security. Central Intelligence Agency advises NSC on all intelligence matters. Operations Coordinating Board provides for integrated implementation of national security policies.

#### COUNCIL OF ECONOMIC ADVISERS (CEA)

Executive Office Bldg.

*Members:* 3. *Established:* Feb. 20, 1946.

*Chairman:* Arthur F. Burns.

*Other members:* Joseph S. Davis, Raymond J. Saulnier.

*Activities:* Assists President in prepara-

tion of economic reports to Congress; studies economic trends; appraises government activities on nation's economy; recommends economic policies.

#### OFFICE OF DEFENSE MOBILIZATION (ODM)

Executive Office Bldg.

*Established:* 1953.

*Director:* Arthur S. Flemming.

*Activities:* Advises President on coordination of military, industrial and civilian mobilization.

### Executive Departments

#### DEPARTMENT OF STATE

21st St. & Virginia Ave., NW.

*Established:* 1781 as Department of Foreign Affairs; reconstituted, 1789, following adoption of Constitution; name changed to Department of State Sept. 15, 1789.

*Secretary:* John Foster Dulles.

*Under Secretary:* Herbert Hoover, Jr.

*Activities:* Determines government policy in relation to international problems; formulates measures for promoting friendship with other countries; develops policies and programs for U. S. participation in U. N. and other international organizations; conducts correspondence with our representatives abroad and with accredited foreign representatives here.

#### DEPARTMENT OF THE TREASURY

15th St. & Pennsylvania Ave., NW.

*Established:* Sept. 2, 1789.

*Secretary:* George M. Humphrey.

*Under Secretary:* W. Randolph Burgess.

*Activities:* Manages national finances; grants warrants for money drawn from Treasury pursuant to legal appropriations; handles collection of revenue; keeps and renders public accounts; prepares plans for improvement of revenue and for support of public credit; reports annually to Congress on condition of public finances; controls coinage and printing of money; administers Coast Guard, Bureau of Narcotics and Secret Service.

#### DEPARTMENT OF DEFENSE

The Pentagon

*Established:* July 26, 1947, as National Military Establishment; name changed to Department of Defense on Aug. 10, 1949. Subordinate to Secretary of Defense are Secretaries of Army, Navy, Air Force.

*Secretary:* Charles E. Wilson.

*Deputy Secretary:* Reuben B. Robertson, Jr.

*Secretary of the Army:* Wilber M. Brucker.

*Secretary of the Navy:* Charles S. Thomas.

*Commandant, Marine Corps:* Gen. Randolph McC. Pate.

*Secretary of the Air Force:* Donald A. Quarles.

*Joint Chiefs of Staff:* Adm. Arthur W. Radford, chairman; Gen. Maxwell D. Taylor, Army; Adm. Arleigh A. Burke, Navy; Gen. Nathan F. Twining, Air Force; Gen. Randolph McC. Pate, Marine Corps (on Marine Corps matter only).

*Activities:* Provides for security of U. S. by establishing integrated policies and procedures; co-ordinates and directs the activities of 3 separately administered military departments (Army, Navy, Air Force).

## DEPARTMENT OF JUSTICE

Constitution Ave. & 10th St., NW.

*Established:* Office of Attorney General was created Sept. 24, 1789. Although he was one of original Cabinet members, he was not executive department head until June 22, 1870, when Department of Justice was established.

*Attorney General:* Herbert Brownell, Jr.  
*Deputy Attorney General:* William P. Rogers.

*Director of FBI:* J. Edgar Hoover.

*Activities:* Provides means for enforcing Federal laws; investigates and detects violations; represents U. S. in legal matters generally and gives advice and opinions when requested by President or heads of executive departments; directs FBI, Bureau of Prisons, Immigration and Naturalization Service.

## POST OFFICE DEPARTMENT

12th St. & Pennsylvania Ave., NW.

*Established:* Office of Postmaster General and temporary post office system created Sept. 22, 1789. Act of Feb. 20, 1792, made detailed provisions for Post Office Department. Postmaster General became Cabinet member in 1829. Department received executive status June 8, 1872.

*Postmaster General:* Arthur E. Summerfield.

*Deputy Postmaster General:* Maurice H. Stans.

*Activities:* Maintains Postal Service of U. S. and executes all laws relative to it; negotiates, subject to approval of President, postal treaties with foreign governments.

## DEPARTMENT OF THE INTERIOR

C St. between 18th & 19th Sts., NW.

*Established:* Mar. 3, 1849.

*Secretary:* Fred A. Seaton.

*Under Secretary:* Clarence A. Davis.

*Activities:* Develops and conserves natural resources of U. S. and territories; supervises public business relating to such offices as Bureau of Land Management, Bureau of Reclamation, Geological Survey, Bureau of Indian Affairs, National Park Service, Bureau of Mines, Fish and Wildlife Service, Office of Territories, etc.

## DEPARTMENT OF AGRICULTURE

14th St. & Independence Ave., SW.

*Established:* May 15, 1862. Administered by Commissioner of Agriculture until Feb. 9, 1889, when it was made executive department and office of Secretary was created.

*Secretary:* Ezra Taft Benson.

*Under Secretary:* True D. Morse.

*Activities:* Conducts comprehensive research and educational program relating to agriculture; provides crop reports, commodity standards, meat inspection and other marketing services; administers national forests; aids in flood control; administers price-support and production-adjustment programs; makes loans to farmers.

## DEPARTMENT OF COMMERCE

14th St. & Constitution Ave., NW.

*Established:* Department of Commerce and Labor was created Feb. 14, 1903. On Mar. 4, 1913, all labor activities were transferred out of Department of Commerce and Labor and it was renamed Department of Commerce.

*Secretary:* Sinclair Weeks.

*Under Secretary:* Walter Williams.

*Activities:* Fosters and develops foreign and domestic commerce of U. S.; maintains Bureau of the Census, Office of Business Economics, Civil Aeronautics Administration, Coast and Geodetic Survey, Maritime Administration, Patent Office, Bureau of Public Roads, National Bureau of Standards, Weather Bureau, etc.

## DEPARTMENT OF LABOR

14th St. & Constitution Ave., NW.

*Established:* Bureau of Labor was created in 1884 under Department of the Interior; later became independent department without executive rank. Returned to bureau status in Department of Commerce and Labor, but on Mar. 4, 1913, became independent executive department under its present name.

*Secretary:* James P. Mitchell.

*Under Secretary:* Arthur Larson.

*Activities:* Promotes welfare of wage earners of U. S.; improving their working conditions and advancing their opportunities for profitable employment; directs collection and collation of statistics concerning labor conditions; promulgates and enforces certain maximum-hour, minimum-wage, child-labor, safety and health standards.

## DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

4th St. & Independence Ave., SW.

*Established:* Apr. 11, 1953, replacing Federal Security Agency, which was created Apr. 25, 1939.

*Secretary:* Marion B. Folsom.

*Under Secretary:* Herold C. Hunt.



**Activities:** Supervises and co-ordinates various organizations within the department. Organizations are: Food and Drug Administration, Office of Education, Office of Vocational Rehabilitation, Public Health Service, St. Elizabeths Hospital, Social Security Administration; also following Federally supported corporations: American Printing House for the Blind, Gallaudet College and Howard University.

### Independent Agencies

(Because of space limitations, only agencies of interest to the general public are listed here.)

#### Executive Department

#### ATOMIC ENERGY COMMISSION (AEC)

19th St. & Constitution Ave., NW.

**Members:** 5. **Established:** Aug. 1, 1946.

**Chairman:** Lewis L. Strauss.

**Other members:** Thomas E. Murray, Dr. W. F. Libby, Dr. John von Neumann, Harold S. Vance.

**Activities:** Promotes Federally conducted and private research and development; controls dissemination of information and production, ownership and use of fissionable materials.

#### CIVIL AERONAUTICS BOARD (CAB)

Dept. of Commerce Bldg.

**Members:** 5. **Established:** June 30, 1940.

**Chairman:** James R. Durfee.

**Activities:** Regulates economic aspects of U. S. air carrier operation; prescribes safety standards; investigates and analyzes aircraft accidents; assists in development of international air transportation.

#### FARM CREDIT ADMINISTRATION (FCA)

South Bldg., Dept. of Agriculture.

**Established:** July 17, 1916.

**Chairman:** Marvin J. Briggs.

**Activities:** Supervises and coordinates cooperative credit system for agriculture; provides long- and short-term credit to farmers and their cooperative marketing, purchasing and business service organizations.

#### FEDERAL CIVIL DEFENSE ADMINISTRATION (FCDA)

Battle Creek, Mich. (Washington office: GSA Bldg., 19th & F Sts., NW.)

**Established:** 1950.

**Administrator:** Val Peterson.

**Activities:** Prepares, plans and directs civil-defense plans and programs.

#### FEDERAL COMMUNICATIONS COMMISSION (FCC)

Post Office Dept. Bldg.

**Members:** 7. **Established:** 1934.

**Chairman:** George C. McConaughy.

**Activities:** Regulates interstate and foreign communications by wire and radio, including amateur radio and TV; regulates operator's licenses; classifies radio stations

and prescribes their services; enforces use of radio for safety purposes on U. S. ships.

#### FEDERAL MEDIATION AND CONCILIATION SERVICE (FMCS)

Department of Labor Bldg.

**Established:** 1947.

**Director:** Joseph F. Finnegan.

**Activities:** Assists in labor-management disputes in industries affecting interstate commerce to reach settlements by mediation or conciliation; promotes better relations between labor and management.

#### FEDERAL POWER COMMISSION (FPC)

General Accounting Office Bldg., 441 G St., NW.

**Established:** June 23, 1930.

**Chairman:** Jerome K. Kuykendall.

**Activities:** Licenses hydroelectric projects on U. S. Government lands or navigable waters; has jurisdiction over interstate commerce involving sale of electric energy and natural gas and companies engaged therein; handles transmission of electric energy and natural gas between U. S. and foreign countries.

#### FEDERAL RESERVE SYSTEM (FRS), BOARD OF GOVERNORS OF

20th St. & Constitution Ave., NW.

**Members:** 7. **Established:** Dec. 23, 1913.

**Chairman:** William McC. Martin, Jr.

**Activities:** Supervises Federal Reserve banks; influences credit conditions; regulates open-market operations; issues Federal Reserve notes.

#### FEDERAL TRADE COMMISSION (FTC)

6th St. & Pennsylvania Ave., NW.

**Members:** 5. **Established:** Sept. 26, 1914.

**Chairman:** John W. Gwynne.

**Activities:** Prevents unfair competition, deceptive practices, false advertising, price discrimination, monopolies.

#### HOUSING AND HOME FINANCE AGENCY (HHFA)

1626 K St., NW.

**Established:** July 27, 1947.

**Administrator:** Albert M. Cole.

**Activities:** Provides single agency responsible for principal housing programs and functions of Federal government; supervises and co-ordinates activities of Federal National Mortgage Association (FNMA), Home Loan Bank Board, Federal Housing Administration (FHA), Public Housing Administration (PHA) and National Housing Council.

#### INTERSTATE COMMERCE COMMISSION (ICC)

12th St. & Constitution Ave., NW.

**Members:** 11. **Established:** Feb. 4, 1887.

**Chairman:** Anthony F. Arpaia.

**Activities:** Regulates railroads, motor

carriers, water carriers and freight forwarders as to rates, through-routes, services and bills of lading; authorizes mergers or consolidations; authorizes issue of securities by carriers.

## **NATIONAL LABOR RELATIONS BOARD (NLRB)**

3rd & C Sts., SW.

*Members:* 5. *Established:* July 5, 1935.

*Chairman:* Boyd Leedom.

*Activities:* Prevents unfair labor practices by employers or labor organizations; conducts secret ballots among employees to determine their choice of bargaining representatives.

## **SECURITIES AND EXCHANGE COMMISSION (SEC)**

425 2nd St., NW.

*Members:* 5. *Established:* June 6, 1934.

*Chairman:* J. Sinclair Armstrong.

*Activities:* Registers and issues regulations for securities and exchanges; registers securities offered for public sale; penalizes violators of regulations subject to appeal to U. S. Court of Appeals.

## **SELECTIVE SERVICE SYSTEM (SSS)**

451 Indiana Ave., NW.

*Established:* 1948.

*Director:* Maj. Gen. Lewis B. Hershey.

*Activities:* Handles registration, examination, classification and selection for induction into armed forces or other disposition of men required to register under Universal Training and Service Act.

## **SMALL BUSINESS ADMINISTRATION (SBA)**

811 Vermont Ave., NW.

*Established:* July 30, 1953.

*Administrator:* Wendell B. Barnes.

*Activities:* Aids and assists the interests of small business firms to insure a fair share of total government contracts; makes loans to small firms and victims of flood and disaster.

## **TENNESSEE VALLEY AUTHORITY (TVA)**

New Sprankle Bldg., Knoxville, Tenn.

(Wash. office: Woodward Bldg., 15th & H Sts., NW.)

*Members:* 3. *Established:* May 18, 1933.

*Chairman:* Herbert D. Vogel.

*Other members:* Harry A. Curtis, Raymond R. Paty.

*Activities:* Provides navigable channel and flood control of Tennessee River and some of its larger tributaries; disposes of surplus electric power; improves, increases and cheapens fertilizer production.

## **U. S. CIVIL SERVICE COMMISSION (CSC)**

8th & F Sts., NW.

*Members:* 3. *Established:* Jan. 16, 1883.

*Chairman:* Philip Young.

*Activities:* Provides examinations to test fitness of applicants for positions in competitive service; provides personnel in response to requests from appointing officers; investigates applicants for national security purposes; classifies positions; maintains service records.

## **U. S. INFORMATION AGENCY (USIA)**

1776 Pennsylvania Ave., NW.

*Established:* Aug. 1, 1953.

*Director:* Theodore C. Streibert.

*Activities:* Directs information to foreign peoples, such as explanation and interpretation of policies of U. S. Government and delineation of U. S. life and culture.

## **U. S. TARIFF COMMISSION**

8th & E Sts., NW.

*Members:* 6. *Established:* Sept. 8, 1916.

*Chairman:* Edgar B. Brossard.

*Activities:* Investigates customs laws, unfair competition and foreign and domestic manufacturing costs; advises the President on duty rates.

## **VETERANS' ADMINISTRATION (VA)**

H St. & Vermont Ave., NW.

*Established:* July 21, 1930.

*Administrator:* H. V. Higley.

*Activities:* Administers laws authorizing benefits for veterans and for their dependents or beneficiaries. Included are hospitalization, pensions, insurance, loans, education, etc.

## **Legislative Department**

## **GENERAL ACCOUNTING OFFICE (GAO)**

441 G St., NW.

*Established:* June 10, 1921.

*Comptroller General of the U. S.:* Joseph Campbell.

*Activities:* Performs independent audits of government financial transactions to provide basis for settlement of accounts and to evaluate management of financial affairs by agencies; exercises power of disallowance based on Comptroller General's settlement of accounts and claims; issues reports to Congress on its findings.

## **LIBRARY OF CONGRESS**

First St., SE, between East Capitol St. and Independence Ave.

*Established:* Apr. 24, 1800.

*Librarian of Congress:* L. Quincy Mumford.

*Activities:* Intended primarily for service of Congress, it has come to include entire governmental establishment and public at large. (For further description, consult index.)

## U. S. Cabinet Members with Dates of Appointment

Although the Constitution made no provision for a President's advisory group, the heads of the three executive departments (State, Treasury and War) and the Attorney General were organized by Washington into such a group; and by about 1793, the name "Cabinet" was applied to it. With the exception of the Attorney General up to 1870 and the Postmaster General from 1829-72, Cabinet members have been heads of executive departments, although other government officials may be called to sit in whenever necessary.

A Cabinet member is appointed by the President, subject to the confirmation of the Senate; and as his term is not fixed, he may be replaced at any time by the

President. At a change in Administration, it is customary for him to tender his resignation, but he remains in office until a successor is appointed.

The table of Cabinet members lists only those members who actually served after being duly commissioned. It does not include ad-interim appointments or cases where the appointee declined the office after appointment.

The dates shown are those of appointment. "Contd" indicates that the term continued from the previous Administration for a substantial amount of time. Those cases where the term continued for only a few days, until a new appointment could be made, are not indicated.

### WASHINGTON

Secretary of State  
Thomas Jefferson..... 1789  
Edmund Randolph..... 1794  
Timothy Pickering..... 1795

Secretary of the Treasury  
Alexander Hamilton..... 1789  
Oliver Wolcott, Jr..... 1795

Secretary of War  
Henry Knox..... 1789  
Timothy Pickering..... 1795  
James McHenry..... 1796

Attorney General  
Edmund Randolph..... 1789  
William Bradford..... 1794  
Charles Lee..... 1795

### J. ADAMS

Secretary of State  
Timothy Pickering..... Contd  
John Marshall..... 1800

Secretary of the Treasury  
Oliver Wolcott, Jr..... Contd  
Samuel Dexter..... 1801

Secretary of War  
James McHenry..... Contd  
Samuel Dexter..... 1800

Attorney General  
Charles Lee..... Contd

Secretary of the Navy  
Benjamin Stoddert.... 1798

### JEFFERSON

Secretary of State  
James Madison..... 1801

Secretary of the Treasury  
Samuel Dexter..... Contd  
Albert Gallatin..... 1801

Secretary of War  
Henry Dearborn..... 1801

### Attorney General

Levi Lincoln..... 1801  
Robert Smith..... 1805  
John Breckinridge..... 1805  
Caesar A. Rodney..... 1807

### Secretary of the Navy

Benjamin Stoddert... Contd  
Robert Smith..... 1801

### MADISON

#### Secretary of State

Robert Smith..... 1809  
James Monroe..... 1811

#### Secretary of the Treasury

Albert Gallatin..... Contd  
George W. Campbell.... 1814  
Alexander J. Dallas.... 1814  
William H. Crawford.... 1816

#### Secretary of War

William Eustis..... 1809  
John Armstrong..... 1813  
James Monroe..... 1814  
William H. Crawford.... 1815

#### Attorney General

Caesar A. Rodney..... Contd  
William Pinckney..... 1811  
Richard Rush..... 1814

#### Secretary of the Navy

Paul Hamilton..... 1809  
William Jones..... 1813  
B. W. Crowninshield... 1814

### MONROE

#### Secretary of State

John Quincy Adams.... 1817

#### Secretary of the Treasury

William H. Crawford.... Contd

#### Secretary of War

John C. Calhoun..... 1817

#### Attorney General

Richard Rush..... Contd  
William Wirt..... 1817

### Secretary of the Navy

B. W. Crowninshield... Contd  
Smith Thompson..... 1818  
Samuel L. Southard.... 1823

### J. Q. ADAMS

#### Secretary of State

Henry Clay..... 1825

#### Secretary of the Treasury

Richard Rush..... 1825

#### Secretary of War

James Barbour..... 1825  
Peter B. Porter..... 1828

#### Attorney General

William Wirt..... Contd

#### Secretary of the Navy

Samuel L. Southard... Contd

### JACKSON

#### Secretary of State

Martin Van Buren..... 1829  
Edward Livingston..... 1831  
Louis McLane..... 1833  
John Forsyth..... 1834

#### Secretary of the Treasury

Samuel D. Ingham..... 1829  
Louis McLane..... 1831  
William J. Duane..... 1833  
Roger B. Taney..... 1833  
Levi Woodbury..... 1834

#### Secretary of War

John H. Eaton..... 1829  
Lewis Cass..... 1831

#### Attorney General

John M. Berrien..... 1829  
Roger B. Taney..... 1831  
Benjamin F. Butler.... 1833

#### Postmaster General

William T. Barry..... 1829  
Amos Kendall..... 1835

### Secretary of the Navy

John Branch..... 1829  
Levi Woodbury..... 1831  
Mahlon Dickerson.... 1834

### VAN BUREN

#### Secretary of State

John Forsyth..... Contd

#### Secretary of the Treasury

Levi Woodbury..... Contd

#### Secretary of War

Joel R. Poinsett..... 1837

#### Attorney General

Benjamin F. Butler... Contd  
Felix Grundy..... 1838  
Henry D. Gilpin..... 1840

#### Postmaster General

Amos Kendall..... Contd  
John M. Niles..... 1840

### Secretary of the Navy

Mahlon Dickerson.... Contd  
James K. Paulding.... 1838

### W. HARRISON

#### Secretary of State

Daniel Webster..... 1841

#### Secretary of the Treasury

Thomas Ewing..... 1841

#### Secretary of War

John Bell..... 1841

#### Attorney General

John J. Crittenden.... 1841

#### Postmaster General

Francis Granger..... 1841

### Secretary of the Navy

George E. Badger..... 1841



**TYLER**

Secretary of State  
 Daniel Webster..... Contd  
 Abel P. Upshur..... 1843  
 John C. Calhoun..... 1844

Secretary of the Treasury  
 Thomas Ewing..... Contd  
 Walter Forward..... 1841  
 John C. Spencer..... 1843  
 George M. Bibb..... 1844

Secretary of War  
 John Bell..... Contd  
 John C. Spencer..... 1841  
 James M. Porter..... 1843  
 William Wilkins..... 1844

Attorney General  
 John J. Crittenden..... Contd  
 Hugh S. Legare..... 1841  
 John Nelson..... 1843

Postmaster General  
 Francis Granger..... Contd  
 Charles A. Wickliffe..... 1841

Secretary of the Navy  
 George E. Badger..... Contd  
 Abel P. Upshur..... 1841  
 David Henshaw..... 1843  
 Thomas W. Gilmer..... 1844  
 John Y. Mason..... 1844

**POLK**

Secretary of State  
 James Buchanan..... 1845

Secretary of the Treasury  
 Robert J. Walker..... 1845

Secretary of War  
 William L. Marcy..... 1845

Attorney General  
 John Y. Mason..... 1845  
 Nathan Clifford..... 1846  
 Isaac Toucey..... 1843

Postmaster General  
 Cave Johnson..... 1845

Secretary of the Navy  
 George Bancroft..... 1845  
 John Y. Mason..... 1846

**TAYLOR**

Secretary of State  
 John M. Clayton..... 1849

Secretary of the Treasury  
 William M. Meredith..... 1849

Secretary of War  
 George W. Crawford..... 1849

Attorney General  
 Beverly Johnson..... 1849

Postmaster General  
 Jacob Collamer..... 1849

Secretary of the Navy  
 William B. Preston..... 1849

**Secretary of the Interior**

Thomas Ewing..... 1849

**FILLMORE****Secretary of State**

Daniel Webster..... 1850  
 Edward Everett..... 1852

**Secretary of the Treasury**

Thomas Corwin..... 1850

**Secretary of War**

Charles M. Conrad..... 1850

**Attorney General**

John J. Crittenden..... 1850

**Postmaster General**

Nathan K. Hall..... 1850  
 Samuel D. Hubbard..... 1852

**Secretary of the Navy**

William A. Graham..... 1850  
 John P. Kennedy..... 1852

**Secretary of the Interior**

Thos. M. T. McKennon. 1850  
 Alex. H. Stuart..... 1850

**PIERCE****Secretary of State**

William L. Marcy..... 1853

**Secretary of the Treasury**

James Guthrie..... 1853

**Secretary of War**

Jefferson Davis..... 1853

**Attorney General**

Caleb Cushing..... 1853

**Postmaster General**

James Campbell..... 1853

**Secretary of the Navy**

James C. Dobbin..... 1853

**Secretary of the Interior**

Robert McClelland..... 1853

**BUCHANAN****Secretary of State**

Lewis Cass..... 1857  
 Jeremiah S. Black..... 1860

**Secretary of the Treasury**

Howell Cobb..... 1857  
 Philip F. Thomas..... 1860  
 John A. Dix..... 1861

**Secretary of War**

John B. Floyd..... 1857  
 Joseph Holt..... 1861

**Attorney General**

Jeremiah S. Black..... 1857  
 Edwin M. Stanton..... 1860

**Postmaster General**

Aaron V. Brown..... 1857  
 Joseph Holt..... 1859  
 Horatio King..... 1861

**Secretary of the Navy**

Isaac Toucey..... 1857

**Secretary of the Interior**

Jacob Thompson..... 1857

**LINCOLN****Secretary of State**

William H. Seward..... 1861

**Secretary of the Treasury**

Salmon P. Chase..... 1861  
 William P. Fessenden.. 1864  
 Hugh McCulloch..... 1865

**Secretary of War**

Simon Cameron..... 1861  
 Edwin M. Stanton..... 1862

**Attorney General**

Edward Bates..... 1861  
 James Speed..... 1864

**Postmaster General**

Montgomery Blair..... 1861  
 William Dennison..... 1864

**Secretary of the Navy**

Gideon Welles..... 1861

**Secretary of the Interior**

Caleb B. Smith..... 1861  
 John P. Usher..... 1863

**JOHNSON****Secretary of State**

William H. Seward.... Contd

**Secretary of the Treasury**

Hugh McCulloch..... Contd

**Secretary of War**

Edwin M. Stanton.... Contd  
 John M. Schofield..... 1868

**Attorney General**

James Speed..... Contd  
 Henry Stanbery..... 1866  
 William M. Evarts..... 1868

**Postmaster General**

William Dennison..... Contd  
 Alexander W. Randall.. 1866

**Secretary of the Navy**

Gideon Welles..... Contd

**Secretary of the Interior**

John P. Usher..... Contd  
 James Harlan..... 1865  
 Orville H. Browning... 1866

**GRANT****Secretary of State**

Elihu B. Washburne... 1869  
 Hamilton Fish..... 1869

**Secretary of the Treasury**

George S. Boutwell.... 1869  
 William A. Richardson.. 1873  
 Benjamin H. Bristow... 1874  
 Lot M. Morrill..... 1876

**Secretary of War**

John A. Rawlins..... 1869  
 William T. Sherman.... 1869  
 William W. Belknap.... 1869  
 Alphonso Taft..... 1876  
 James D. Cameron..... 1876

**Attorney General**

Ebenezer R. Hoar..... 1869  
 Amos T. Akerman..... 1870  
 George H. Williams.... 1871  
 Edwards Pierpont..... 1875  
 Alphonso Taft..... 1876

**Postmaster General**

John A. J. Creswell.... 1869  
 James W. Marshall..... 1874  
 Marshall Jewell..... 1874  
 James N. Tyner..... 1876

**Secretary of the Navy**

Adolph E. Borie..... 1869  
 George M. Robeson.... 1869

**Secretary of the Interior**

Jacob D. Cox..... 1869  
 Columbus Delano..... 1870  
 Zachariah Chandler.... 1875

**HAYES****Secretary of State**

William M. Evarts.... 1877

**Secretary of the Treasury**

John Sherman..... 1877

**Secretary of War**

George W. McCrary.... 1877  
 Alexander Ramsey..... 1879

**Attorney General**

Charles Devens..... 1877

**Postmaster General**

David M. Key..... 1877  
 Horace Maynard..... 1880

**Secretary of the Navy**

Richard W. Thompson.. 1877  
 Nathan Goff, Jr..... 1881

**Secretary of the Interior**

Carl Schurz..... 1877

**GARFIELD****Secretary of State**

James G. Blaine..... 1881

**Secretary of the Treasury**

William Windom..... 1881

**Secretary of War**

Robert T. Lincoln..... 1881

**Attorney General**

Wayne MacVeagh..... 1881

**Postmaster General**

Thomas L. James..... 1881

**Secretary of the Navy**

William H. Hunt..... 1881

**Secretary of the Interior**

Samuel J. Kirkwood... 1881

**ARTHUR**

## Secretary of State

James G. Blaine..... Contd  
F. T. Frelinghuysen..... 1881

## Secretary of the Treasury

William Windom..... Contd  
Charles J. Folger..... 1881  
Walter Q. Gresham..... 1884  
Hugh McCulloch..... 1884

## Secretary of War

Robert T. Lincoln..... Contd

## Attorney General

Wayne MacVeagh..... Contd  
Benjamin H. Brewster..... 1881

## Postmaster General

Thomas L. James..... Contd  
Timothy O. Howe..... 1881  
Walter Q. Gresham..... 1883  
Frank Hatton..... 1884

## Secretary of the Navy

William H. Hunt..... Contd  
William E. Chandler..... 1882

## Secretary of the Interior

Samuel J. Kirkwood..... Contd  
Henry M. Teller..... 1882

**CLEVELAND**

## Secretary of State

Thomas F. Bayard..... 1885

## Secretary of the Treasury

Daniel Manning..... 1885  
Charles S. Fairchild..... 1887

## Secretary of War

William C. Endicott..... 1885

## Attorney General

Augustus H. Garland... 1885

## Postmaster General

William F. Vilas..... 1885  
Don M. Dickinson..... 1888

## Secretary of the Navy

William C. Whitney.... 1885

## Secretary of the Interior

Lucius Q. C. Lamar..... 1885  
William F. Vilas..... 1888

## Secretary of Agriculture

Norman J. Colman..... 1889

**HARRISON**

## Secretary of State

James G. Blaine..... 1889  
John W. Foster..... 1892

## Secretary of the Treasury

William Windom..... 1889  
Charles Foster..... 1891

## Secretary of War

Redfield Proctor..... 1889  
Stephen B. Elkins..... 1891

## Attorney General

William H. H. Miller... 1889

## Postmaster General

John Wanamaker..... 1889

## Secretary of the Navy

Benjamin F. Tracy..... 1889

## Secretary of the Interior

John W. Noble..... 1889

## Secretary of Agriculture

Jeremiah M. Rusk..... 1889

**CLEVELAND**

## Secretary of State

Walter Q. Gresham.... 1893  
Richard Olney..... 1895

## Secretary of the Treasury

John G. Carlisle..... 1893

## Secretary of War

Daniel S. Lamont..... 1893

## Attorney General

Richard Olney..... 1893  
Judson Harmon..... 1895

## Postmaster General

Wilson S. Bissell..... 1893  
William L. Wilson..... 1895

## Secretary of the Navy

Hilary A. Herbert..... 1893

## Secretary of the Interior

Hoke Smith..... 1893  
David R. Francis..... 1896

## Secretary of Agriculture

Julius Sterling Morton. 1893

**McKINLEY**

## Secretary of State

John Sherman..... 1897  
William R. Day..... 1898  
John Hay..... 1898

## Secretary of the Treasury

Lyman J. Gage..... 1897

## Secretary of War

Russell A. Alger..... 1897  
Elihu Root..... 1899

## Attorney General

Joseph McKenna..... 1897  
John W. Griggs..... 1898  
Philander C. Knox..... 1901

## Postmaster General

James A. Gary..... 1897  
Charles E. Smith..... 1898

## Secretary of the Navy

John D. Long..... 1897

## Secretary of the Interior

Cornelius N. Bliss.... 1897  
Ethan A. Hitchcock.... 1898

## Secretary of Agriculture

James Wilson..... 1897

**T. ROOSEVELT**

## Secretary of State

John Hay..... Contd  
Elihu Root..... 1905  
Robert Bacon..... 1909

## Secretary of the Treasury

Lyman J. Gage..... Contd  
Leslie M. Shaw..... 1902  
George B. Cortelyou... 1907

## Secretary of War

Elihu Root..... Contd  
William H. Taft..... 1904  
Luke E. Wright..... 1908

## Attorney General

Philander C. Knox.... Contd  
William H. Moody..... 1904  
Charles J. Bonaparte... 1906

## Postmaster General

Charles E. Smith..... Contd  
Henry C. Payne..... 1902  
Robert J. Wynne..... 1904  
George B. Cortelyou... 1905  
George von L. Meyer... 1907

## Secretary of the Navy

John D. Long..... Contd  
William H. Moody..... 1902  
Paul Morton..... 1904  
Charles J. Bonaparte... 1905  
Victor H. Metcalf..... 1906  
Truman H. Newberry... 1908

## Secretary of the Interior

Ethan A. Hitchcock... Contd  
James R. Garfield..... 1907

## Secretary of Agriculture

James Wilson..... Contd

## Secretary of Commerce and Labor

George B. Cortelyou... 1903  
Victor H. Metcalf..... 1904  
Oscar S. Straus..... 1906

**TAFT**

## Secretary of State

Philander C. Knox.... 1909

## Secretary of the Treasury

Franklin MacVeagh... 1909

## Secretary of War

Jacob M. Dickinson... 1909  
Henry L. Stimson..... 1911

## Attorney General

George W. Wickersham. 1909

## Postmaster General

Frank H. Hitchcock... 1909

## Secretary of the Navy

George von L. Meyer... 1909

## Secretary of the Interior

Richard A. Ballinger... 1909  
Walter L. Fisher..... 1911

## Secretary of Agriculture

James Wilson..... Contd

## Secretary of Commerce and Labor

Charles Nagel..... 19

**WILSON**

## Secretary of State

William J. Bryan..... 19  
Robert Lansing..... 19  
Bainbridge Colby..... 19

## Secretary of the Treasury

William G. McAdoo... 19  
Carter Glass..... 19  
David F. Houston..... 19

## Secretary of War

Lindley M. Garrison... 19  
Newton D. Baker..... 19

## Attorney General

James C. McReynolds... 19  
Thomas W. Gregory... 19  
A. Mitchell Palmer... 19

## Postmaster General

Albert S. Burleson... 19

## Secretary of the Navy

Joseph Daniels..... 19

## Secretary of the Interior

Franklin K. Lane..... 19  
John B. Payne..... 19

## Secretary of Agriculture

David F. Houston..... 19  
Edwin T. Meredith... 19

## Secretary of Commerce

William C. Redfield... 19  
Joshua W. Alexander... 19

## Secretary of Labor

William B. Wilson..... 19

**HARDING**

## Secretary of State

Charles E. Hughes.... 192

## Secretary of the Treasury

Andrew W. Mellon.... 192

## Secretary of War

John W. Weeks..... 192

## Attorney General

Harry M. Daugherty... 192

## Postmaster General

Will H. Hays..... 192  
Hubert Work..... 192  
Harry S. New..... 192

## Secretary of the Navy

Edwin Denby..... 192

## Secretary of the Interior

Albert B. Fall..... 192  
Hubert Work..... 192

## Secretary of Agriculture

Henry C. Wallace..... 192

## Secretary of Commerce

Herbert Hoover..... 192

## Secretary of Labor

James J. Davis..... 192

**COOLIDGE**

Secretary of State  
Charles E. Hughes..... Contd  
Frank B. Kellogg..... 1925

Secretary of the Treasury  
Andrew W. Mellon..... Contd

Secretary of War  
John W. Weeks..... Contd  
 Dwight F. Davis..... 1925

Attorney General  
Harry M. Daugherty..... Contd  
Charles F. Stone..... 1924  
John G. Sargent..... 1925

Postmaster General  
Harry S. New..... Contd

Secretary of the Navy  
Edwin Denby..... Contd  
Curtis D. Wilbur..... 1924

Secretary of the Interior  
Hubert Work..... Contd  
Roy O. West..... 1928

Secretary of Agriculture  
Henry C. Wallace..... Contd  
Howard M. Gore..... 1924  
William M. Jardine..... 1925

Secretary of Commerce  
Herbert Hoover..... Contd  
William F. Whiting..... 1928

Secretary of Labor  
James J. Davis..... Contd

**HOOVER**

Secretary of State  
Frank B. Kellogg..... Contd  
Henry L. Stimson..... 1929

Secretary of the Treasury  
Andrew W. Mellon.... Contd  
Caldwell L. Mills..... 1932

Secretary of War  
James W. Good..... 1929  
Patrick J. Hurley..... 1929

<sup>1</sup> The Postmaster General did not become a Cabinet member until 1929. Earlier Postmasters General were: Samuel Hays (1789), Timothy Pickens (1791), Joseph Habersham (1795), Gideon Granger (1801), Return J. Meigs, Jr. (1814) and John McLean (1823). <sup>2</sup> On July 26, 1947, the Departments of War and of the Navy were incorporated into the Department of Defense.

**Attorney General**

William D. Mitchell.... 1929

**Postmaster General**

Walter F. Brown..... 1929

**Secretary of the Navy**

Charles F. Adams..... 1929

**Secretary of the Interior**

Ray Lyman Wilbur.... 1929

**Secretary of Agriculture**

Arthur M. Hyde..... 1929

**Secretary of Commerce**

Robert P. Lamont..... 1929  
Roy D. Chapin..... 1932

**Secretary of Labor**

James J. Davis..... Contd  
William N. Doak..... 1930

**F. ROOSEVELT****Secretary of State**

Cordell Hull..... 1933  
E. R. Stettinius, Jr.... 1944

**Secretary of the Treasury**

William H. Woodin.... 1933  
Henry Morgenthau, Jr.. 1934

**Secretary of War**

George H. Dern..... 1933  
Harry H. Woodring.... 1936  
Henry L. Stimson..... 1940

**Attorney General**

Homer S. Cummings... 1933  
Frank Murphy..... 1939  
Robert H. Jackson.... 1940  
Francis Biddle..... 1941

**Postmaster General**

James A. Farley..... 1933  
Frank C. Walker..... 1940

**Secretary of the Navy**

Claude A. Swanson.... 1933  
Charles Edison..... 1940  
Frank Knox..... 1940  
James Forrestal..... 1944

**Secretary of the Interior**

Harold L. Ickes..... 1933

**Secretary of Agriculture**

Henry A. Wallace..... 1933  
Claude R. Wickard.... 1940

**Secretary of Commerce**

Daniel C. Roper..... 1933  
Harry L. Hopkins..... 1938  
Jesse H. Jones..... 1940  
Henry A. Wallace..... 1945

**Secretary of Labor**

Frances Perkins..... 1933

**TRUMAN****Secretary of State**

E. R. Stettinius, Jr.... Contd  
James F. Byrnes..... 1945  
George C. Marshall.... 1947  
Dean Acheson..... 1949

**Secretary of the Treasury**

Henry Morgenthau, Jr. Contd  
Fred M. Vinson..... 1945  
John W. Snyder..... 1946

**Secretary of Defense**

James Forrestal..... 1947  
Louis A. Johnson..... 1949  
George C. Marshall.... 1950  
Robert A. Lovett..... 1951

**Attorney General**

Francis Biddle..... Contd  
Tom C. Clark..... 1945  
J. Howard McGrath.... 1949  
James P. McGranery... 1952

**Postmaster General**

Frank C. Walker..... Contd  
Robert E. Hannegan... 1945  
Jesse M. Donaldson.... 1947

**Secretary of the Interior**

Harold L. Ickes..... Contd  
Julius C. Krug..... 1946  
Oscar L. Chapman..... 1949

**Secretary of Agriculture**

Claude R. Wickard.... Contd  
Clinton P. Anderson... 1945  
Charles F. Brannan.... 1948

**Secretary of Commerce**

Henry A. Wallace..... Contd  
W. Averell Harriman... 1946  
Charles Sawyer..... 1948

**Secretary of Labor**

Frances Perkins..... Contd  
Lewis B. Schwellenbach 1945  
Maurice J. Tobin..... 1948

**Secretary of War<sup>2</sup>**

Henry L. Stimson..... Contd  
Robert P. Patterson... 1945  
Kenneth C. Royall..... 1947

**Secretary of the Navy<sup>2</sup>**

James Forrestal..... Contd

**EISENHOWER****Secretary of State**

John Foster Dulles.... 1953

**Secretary of the Treasury**

George M. Humphrey.. 1953

**Secretary of Defense**

Charles E. Wilson..... 1953

**Attorney General**

Herbert Brownell, Jr.. 1953

**Postmaster General**

Arthur Summerfield... 1953

**Secretary of the Interior**

Douglas McKay..... 1953  
Frederick A. Seaton... 1956

**Secretary of Agriculture**

Ezra Taft Benson..... 1953

**Secretary of Commerce**

Sinclair Weeks..... 1953

**Secretary of Labor**

Martin P. Durkin..... 1953  
James P. Mitchell.... 1953

**Secretary of Health,  
Education and Welfare**

Oveta Culp Hobby..... 1953  
Marion B. Folsom..... 1955

**Special Assistant to**

President for Disarmament  
Harold E. Stassen.... 1955

**The Confederate States of America, 1861-65**

**President**—Jefferson Davis; born, Christian (now Todd) Co., Ky., June 3, 1808; died, Dec. 6, 1889. **Vice President**—Alexander H. Stephens.

**CABINET\***

<b>Secretary of State</b>	<b>Secretary of War</b>	<b>Secretary of Navy</b>	<b>Attorney General</b>
Robert Toombs..... 1861	Leroy P. Walker..... 1861	Stephen R. Mallory.... 1861	Judah P. Benjamin.... 1861
Robert M. T. Hunter... 1861	Judah P. Benjamin.... 1861		Thomas Bragg..... 1861
Judah P. Benjamin..... 1862	George W. Randolph... 1862	<b>Postmaster General</b>	Thomas N. Watts..... 1862
<b>Secretary of Treasury</b>	James A. Seddon..... 1862	Henry T. Ellett..... 1861	George Davis..... 1864
Christopher Memminger 1861	John C. Breckinridge... 1865	John H. Reagan..... 1861	
George A. Trenholm.... 1864			

\* Dates are those of appointment.



## Justices of the United States Supreme Court

Name	State	Term	Years	Born	Died	Name	State	Term	Years	Born	Died
*John Jay.....	N. Y.	1789-1795	6	1745	1829	Horace Gray.....	Mass.	1881-1902	21	1828	1902
John Rutledge.....	S. C.	1789-1791	2	1739	1800	Samuel Blatchford.....	N. Y.	1882-1893	11	1820	1893
William Cushing.....	Mass.	1789-1810	21	1732	1810	Lucius Q. Lamar.....	Miss.	1888-1893	5	1825	1893
James Wilson.....	Pa.	1789-1798	9	1742	1798	*Melville W. Fuller.....	Ill.	1888-1910	22	1833	1910
John Blair.....	Va.	1789-1796	7	1732	1800	David J. Brewer.....	Kans.	1889-1910	21	1837	1910
James Iredell.....	N. C.	1790-1799	9	1751	1799	Henry B. Brown.....	Mich.	1890-1906	16	1836	1913
Thomas Johnson.....	Md.	1792-1793	1½	1732	1819	George Shiras, Jr.....	Pa.	1892-1903	11	1832	1926
William Paterson.....	N. J.	1793-1806	13	1745	1806	Howard E. Jackson.....	Tenn.	1893-1895	2	1832	1895
*John Rutledge.....	S. C.	1795-1795	—	1739	1800	Edward D. White.....	La.	1894-1910	16	1845	1921
Samuel Chase.....	Md.	1796-1811	15	1741	1811	Rufus W. Peckham.....	N. Y.	1895-1909	14	1838	1909
*Oliver Ellsworth.....	Conn.	1796-1800	4	1745	1807	Joseph McKenna.....	Calif.	1898-1925	27	1843	1926
Bushrod Washington.....	Va.	1798-1829	31	1762	1829	Oliver W. Holmes.....	Mass.	1902-1932	30	1841	1935
Alfred Moore.....	N. C.	1800-1804	4	1755	1810	William R. Day.....	Ohio	1903-1922	19	1849	1922
*John Marshall.....	Va.	1801-1835	34	1755	1835	William H. Moody.....	Mass.	1906-1910	4	1853	1917
William Johnson.....	S. C.	1804-1834	30	1771	1834	Horace H. Lurton.....	Tenn.	1909-1914	5	1844	1914
Brock Livingston.....	N. Y.	1806-1823	17	1757	1823	*Edward D. White.....	La.	1910-1921	11	1845	1921
Thomas Todd.....	Ky.	1807-1826	19	1765	1826	Charles E. Hughes.....	N. Y.	1910-1916	6	1862	1948
Joseph Story.....	Mass.	1811-1845	34	1779	1845	Willis Van Devanter.....	Wyo.	1910-1937	26	1859	1941
Gabriel Duval.....	Md.	1811-1835	23	1752	1844	Joseph R. Lamar.....	Ga.	1910-1916	6	1857	1916
Smith Thompson.....	N. Y.	1823-1843	20	1768	1843	Mahlon Pitney.....	N. J.	1912-1923	11	1858	1924
Robert Trimble.....	Ky.	1826-1828	2	1777	1828	Jas. C. McReynolds.....	Tenn.	1914-1941	26	1862	1946
John McLean.....	Ohio	1829-1861	32	1785	1861	Louis D. Brandeis.....	Mass.	1916-1939	23	1856	1941
Henry Baldwin.....	Pa.	1830-1844	14	1780	1844	John H. Clarke.....	Ohio	1916-1922	6	1857	1945
James M. Wayne.....	Ga.	1835-1867	32	1790	1867	*William H. Taft.....	Conn.	1921-1930	9	1857	1930
*Roger B. Taney.....	Md.	1836-1864	28	1777	1864	George Sutherland.....	Utah	1922-1938	16	1862	1942
Philip P. Barbour.....	Va.	1836-1841	5	1783	1841	Pierce Butler.....	Minn.	1922-1939	17	1866	1935
John Catron.....	Tenn.	1837-1865	28	1786	1865	Edward T. Sanford.....	Tenn.	1923-1930	7	1865	1930
John McKinley.....	Ala.	1837-1852	15	1780	1852	Harlan F. Stone.....	N. Y.	1925-1941	16	1872	1946
Peter V. Daniel.....	Va.	1841-1860	19	1784	1860	*Charles E. Hughes.....	N. Y.	1930-1941	11	1862	1948
Samuel Nelson.....	N. Y.	1845-1872	27	1792	1873	Owen J. Roberts.....	Pa.	1930-1945	15	1875	1955
Levi Woodbury.....	N. H.	1845-1851	6	1789	1851	Benjamin N. Cardozo.....	N. Y.	1932-1938	6	1870	1938
Robert C. Grier.....	Pa.	1846-1870	23	1794	1870	Hugo L. Black.....	Ala.	1937-1971	—	1886	—
Benjamin R. Curtis.....	Mass.	1851-1857	6	1809	1874	Stanley F. Reed.....	Ky.	1938-1962	—	1884	—
John A. Campbell.....	Ala.	1853-1861	8	1811	1889	Felix Frankfurter.....	Mass.	1939-1963	—	1882	—
Nathan Clifford.....	Maine	1858-1881	23	1803	1881	William O. Douglas.....	Conn.	1939-1969	—	1898	—
Noah H. Swayne.....	Ohio	1862-1881	18	1804	1884	Frank Murphy.....	Mich.	1940-1949	9	1890	1949
Samuel F. Miller.....	Iowa	1862-1890	28	1816	1890	*Harlan F. Stone.....	N. Y.	1941-1946	5	1872	1946
David Davis.....	Ill.	1862-1877	15	1815	1886	James F. Byrnes.....	S. C.	1941-1942	1	1879	—
Stephen J. Field.....	Calif.	1863-1897	34	1816	1899	Robert H. Jackson.....	N. Y.	1941-1954	13	1892	1954
*Salmon P. Chase.....	Ohio	1864-1873	9	1808	1873	Wiley B. Rutledge.....	Iowa	1943-1949	6	1894	1949
William Strong.....	Pa.	1870-1880	10	1808	1895	Harold H. Burton.....	Ohio	1945-1955	—	1888	—
Joseph P. Bradley.....	N. J.	1870-1892	22	1813	1892	*Fred M. Vinson.....	Ky.	1946-1953	7	1890	1953
Ward Hunt.....	N. Y.	1872-1882	10	1810	1886	Tom C. Clark.....	Tex.	1949-1968	—	1899	—
*Morrison R. Waite.....	Ohio	1874-1888	14	1816	1888	Sherman Minton.....	Ind.	1949-1958	—	1890	—
John M. Harlan.....	Ky.	1877-1911	34	1833	1911	*Earl Warren.....	Calif.	1953-1968	—	1891	—
William B. Woods.....	Ga.	1880-1887	7	1824	1887	John M. Harlan.....	N. Y.	1955-1961	—	1899	—
Stanley Matthews.....	Ohio	1881-1889	8	1824	1889						

\* Chief Justices. † Appointed and served one term, but not confirmed by Senate. ‡ Retired effective Oct. 15, 1956.

## Federal Impeachments

*Source: Congressional Directory.*

The Senate has sat as a court of impeachment in the following cases:

**WILLIAM BLOUNT**, Senator from Tennessee; charges dismissed for want of jurisdiction, January 14, 1799.

**JOHN PICKERING**, Judge of the U. S. District Court for New Hampshire; removed from office March 12, 1804.

**SAMUEL CHASE**, Associate Justice of the Supreme Court; acquitted March 1, 1805.

**JAMES H. PECK**, Judge of the U. S. District Court for Missouri; acquitted Jan. 31, 1831.

**WEST H. HUMPHREYS**, Judge of the United States District Court for the middle, eastern, and western districts of Tennessee; removed from office June 26, 1862.

**ANDREW JOHNSON**, President of the United States; acquitted May 26, 1868.

**WILLIAM W. BELKNAP**, Secretary of War; acquitted Aug. 1, 1876.

**CHARLES SWAYNE**, Judge of the United States District Court for the northern district of Florida; acquitted Feb. 27, 1905.

**ROBERT W. ARCHBOLD**, Associate Justice, United States Commerce Court; removed from office January 13, 1913.

**GEORGE W. ENGLISH**, Judge of the U. S. District Court for the eastern district of Illinois; resigned office November 4, 1926; impeachment proceedings dismissed.

**HAROLD LOUDERBACK**, Judge of the U. S. District Court for the northern district of California; acquitted May 24, 1933.

**HALSTED L. RITTER**, Judge of the U. S. District Court for the southern district of Florida; removed April 17, 1936.

## SPEAKERS OF THE HOUSE OF REPRESENTATIVES

Source: Congressional Directory.

Name and state	Congress	Dates served	Name and state	Congress	Dates served
Frederick A. C. Muhlenberg (Pa.)	1	1789-1791	Galusha A. Grow (Pa.)	37	1861-1863
Jonathan Trumbull (Conn.)	2	1791-1793	Schuyler Colfax (Ind.)	38-40	1863-1869
Frederick A. C. Muhlenberg (Pa.)	3	1793-1795	Theodore M. Pomeroy (N. Y.) <sup>5</sup>	40	1869-1869
Jonathan Dayton (N. J.) <sup>1</sup>	4-5	1795-1799	James G. Blaine (Maine)	41-43	1869-1875
Theodore Sedgwick (Mass.)	6	1799-1801	Michael C. Kerr (Ind.) <sup>6</sup>	44	1875-1876
Nathaniel Macon (N. C.)	7-9	1801-1807	Samuel J. Randall (Pa.)	44-46	1876-1881
Joseph B. Varnum (Mass.)	10-11	1807-1811	J. Warren Keifer (Ohio)	47	1881-1883
Henry Clay (Ky.) <sup>2</sup>	12-13	1811-1814	John G. Carlisle (Ky.)	48-50	1883-1889
Langdon Cheves (S. C.)	13	1814-1815	Thomas B. Reed (Maine)	51	1889-1891
Henry Clay (Ky.) <sup>3</sup>	14-16	1815-1820	Charles F. Crisp (Ga.)	52-53	1891-1895
John W. Taylor (N. Y.)	16	1820-1821	Thomas B. Reed (Maine)	54-55	1895-1899
Philip P. Barbour (Va.)	17	1821-1823	David B. Henderson (Iowa)	56-57	1899-1903
Henry Clay (Ky.)	18	1823-1825	Joseph G. Cannon (Ill.)	58-61	1903-1911
John W. Taylor (N. Y.)	19	1825-1827	Champ Clark (Mo.)	62-65	1911-1919
Andrew Stevenson (Va.) <sup>4</sup>	20-23	1827-1834	Frederick H. Gillett (Mass.)	66-68	1919-1925
John Bell (Tenn.)	23	1834-1835	Nicholas Longworth (Ohio)	69-71	1925-1931
James K. Polk (Tenn.)	24-25	1835-1839	John N. Garner (Tex.)	72	1931-1933
Robert M. T. Hunter (Va.)	26	1839-1841	Henry T. Rainey (Ill.) <sup>7</sup>	73	1933-1934
John White (Ky.)	27	1841-1843	Joseph W. Byrns (Tenn.) <sup>8</sup>	74	1935-1936
John W. Jones (Va.)	28	1843-1845	William B. Bankhead (Ala.) <sup>9</sup>	74-76	1936-1940
John W. Davis (Ind.)	29	1845-1847	Sam Rayburn (Tex.)	76-79	1940-1947
Robert C. Winthrop (Mass.)	30	1847-1849	Joseph W. Martin, Jr. (Mass.)	80	1947-1949
Howell Cobb (Ga.)	31	1849-1851	Sam Rayburn (Tex.)	81-82	1949-1953
Linn Boyd (Ky.)	32-33	1851-1855	Joseph W. Martin, Jr. (Mass.)	83	1953-1955
Nathaniel P. Banks (Mass.)	34	1855-1857	Sam Rayburn (Tex.)	84	1955-
James L. Orr (S. C.)	35	1857-1859			
Wm. Pennington (N. J.)	36	1859-1861			

<sup>1</sup> George Dent (Md.) was elected Speaker pro tempore for Apr. 20 and May 28, 1798. <sup>2</sup> Resigned during 2d session of 13th Congress. <sup>3</sup> Resigned between 1st and 2d sessions of 16th Congress. <sup>4</sup> Resigned during 1st session of 23d Congress. <sup>5</sup> Elected Speaker and served the day of adjournment. <sup>6</sup> Died between 1st and 2d sessions of 44th Congress. During 1st session, there were two Speakers pro tempore: Samuel S. Cox (N. Y.), appointed for Feb. 17, May 12 and June 19, 1876, and Milton Saylor (Ohio), appointed for June 4, 1876. <sup>7</sup> Died 1934 after adjournment of 2nd session of 73rd Congress. <sup>8</sup> Died during 2d session of 74th Congress. <sup>9</sup> Died during 3d session of 76th Congress.

## The White House

Source: National Park Service.

The White House, the official residence of the President, is located on Pennsylvania Avenue in Washington, D. C. The site covering about 18 acres was selected by President Washington and Pierre Charles L'Enfant, and the architect was James Hoban. The design of the mansion is said to have been suggested by the Duke of Leinster's Palace in Ireland. The cornerstone was laid Oct. 13, 1792, and the first residents were President and Mrs. John Adams in Nov. 1800. The building was fired by the British in 1814, and the sandstone exterior was painted white during the course of reconstruction.

The rooms for public functions are on the first floor; on the second are the President's apartments. The most celebrated public room is the East Room, where formal receptions take place. Other public rooms are the Red Room, the Green Room, and the Blue

Room. The State Dining Room is used for formal dinners.

The Executive Office, a three-story structure at the west end of the West Terrace, was added to the original building in 1902 to accommodate the President's office staff, and several additions have since been made. In 1942, a three-story building was erected at the end of the East Terrace, and now serves as the White House main entrance. In 1948, a second-story balcony was added to the White House inside the Ionic pillars of the south portico.

From Nov. 1948 to Mar. 1952, the White House was closed for social engagements and sightseers because of the deterioration of the building and the fear that it might collapse at any time. The walls were retained and strengthened, and the interior was rebuilt. There are now 132 rooms instead of the former 62.

## The Cairo Conference

Important provisions of the Conference, which was held Nov. 22-26, 1943:

The several military missions have agreed upon future military operations against Japan. The Three Great Allies expressed their resolve to bring unrelenting pressure against their brutal enemies by sea, land, and air. This pressure is already rising.

The Three Great Allies are fighting this war to restrain and punish the aggression of Japan. They covet no gain for themselves and have no thought of territorial expansion. It is their purpose that Japan shall be stripped of all the islands in the Pacific which she has seized or occupied since the beginning of the first World War

in 1914, and that all the territories Japan has stolen from the Chinese, such as Manchuria, Formosa, and the Pescadores, shall be restored to the Republic of China. Japan will also be expelled from all other territories which she has taken by violence and greed. The aforesaid Three Great Powers, mindful of the enslavement of the people of Korea, are determined that in due course Korea shall become free and independent.

With these objectives in view the three Allies, in harmony with those of the United Nations at war with Japan, will continue to persevere in the serious and prolonged operations necessary to procure the unconditional surrender of Japan.

## The Teheran Conference

(Nov. 28-Dec. 1, 1943)

The President of the United States of America, the Premier of the Union of Soviet Socialist Republics, and the Prime Minister of the United Kingdom, have consulted with each other and with the Prime Minister of Iran, desire to declare the mutual agreement of their three Governments regarding relations with Iran.

The Governments of the United States of America, the Union of Soviet Socialist Republics and the United Kingdom recognize the assistance which Iran has given in the prosecution of the war against the common enemy, particularly by facilitating transportation of supplies from overseas to the Soviet Union. The three Governments realize that the war has caused special economic difficulties for Iran and they are agreed that they will continue to make available to the Government of Iran such economic assistance as may be possible, having regard to the heavy demands made upon them by their worldwide military operations and to the worldwide shortage of transport, raw materials and supplies for civilian consumption.

With respect to the post-war period, the Governments of the United States of America, the Union of Soviet Socialist Republics and the United Kingdom are in accord with the Government of Iran that any economic problem confronting Iran at the close of hostilities should receive full consideration along with those of the other members of the United Nations by conferences or international agencies held or created to deal with international economic matters.

The Governments of the United States of America, the Union of Soviet Socialist Republics and the United Kingdom are at one with the Government of Iran in their desire for the maintenance of the independence, sovereignty and territorial integrity of Iran. They count upon the participation of Iran together with all other peace-loving nations in the establishment of international peace, security and prosperity after the war in accordance with the principles of the Atlantic Charter, to which all four governments have continued to subscribe.

## The Yalta Conference

Important provisions of the Conference, which was held Feb. 4-11, 1945:

### The Occupation and Control of Germany

We have agreed on common policies and plans for enforcing the unconditional surrender terms which we shall impose together on Nazi Germany after German armed resistance has been finally crushed. These terms will not be made known until the final defeat of Germany has been accomplished. Under the agreed plan, the forces of the three powers will each occupy a separate zone of Germany. Coordinated administration and control has been provided for under the plan through a central Control Commission, consisting of

the supreme commanders of the three powers, with headquarters in Berlin. It has been agreed that France should be invited by the three powers, if she should so desire, to take over a zone of occupation, and to participate as a fourth member of the Control Commission. The limits of the French zone will be agreed upon by the four Governments concerned through their representatives on the European Advisory Commission.

It is our inflexible purpose to destroy German militarism and nazism and to ensure that Germany will never again be able to disturb the peace of the world. We are determined to disarm and disband all



German armed forces; break up for all time the German General Staff that has repeatedly contrived the resurgence of German militarism; remove or destroy all German military equipment; eliminate or control all German industry that could be used for military production; bring all war criminals to just and swift punishment and exact reparation in kind for the destruction wrought by the Germans; wipe out the Nazi Party, Nazi laws, organizations, and institutions, remove all Nazi and militarist influences from public office and from the cultural and economic life of the German people; and take in harmony such other measures in Germany as may be necessary to the future peace and safety of the world. It is not our purpose to destroy the people of Germany, but only when nazism and militarism have been extirpated will there be hope for a decent life for Germans, and a place for them in the comity of nations.

#### Terms Under Which Russia Entered the War Against Japan

The leaders of the Three Great Powers—the Soviet Union, the United States of America and Great Britain—have agreed that in two or three months after Germany has surrendered and the war in Europe has terminated the Soviet Union shall enter into the war against Japan on the side of the Allies on condition that:

1. The status quo in Outer Mongolia (The Mongolian People's Republic) shall be preserved;
2. The former rights of Russia violated by the treacherous attack of Japan in 1904 shall be restored, viz.:

(a) the southern part of Sakhalin as well as all the islands adjacent to it shall be returned to the Soviet Union,

(b) the commercial port of Dairen shall be internationalized, the preeminent interests of the Soviet Union in this port being safeguarded and the lease of Port Arthur as a naval base of the U.S.S.R. restored,

(c) the Chinese-Eastern Railroad and the South-Manchurian Railroad which provides an outlet to Dairen shall be jointly operated by the establishment of a joint Soviet-Chinese Company, it being understood that the preeminent interests of the Soviet Union shall be safeguarded and that China shall retain full sovereignty in Manchuria;

3. The Kurile Islands shall be handed over to the Soviet Union.

It is understood, that the agreement concerning Outer Mongolia and the ports and railroads referred to above will require concurrence of Generalissimo Chiang Kai-shek. The President will take measures in order to obtain this concurrence on advice from Marshal Stalin.

The Heads of the Three Great Powers have agreed that these claims of the Soviet Union shall be unquestionably fulfilled after Japan has been defeated.

For its part the Soviet Union expresses its readiness to conclude with the National Government of China a pact of friendship and alliance between the U.S.S.R. and China in order to render assistance to China with its armed forces for the purpose of liberating China from the Japanese yoke.

## The Potsdam Declaration

Text of the declaration issued at Potsdam, Germany, July 26, 1945, outlining the terms under which Japan would be allowed to surrender:

1. We, the President of the United States, the President of the national government of the Republic of China and the Prime Minister of Great Britain, representing the hundreds of millions of our countrymen, have conferred and agreed that Japan shall be given the opportunity to end this war.

2. The prodigious land, sea, and air forces of the United States, the British Empire and China, many times reinforced by their armies and air fleets from the west, are poised to strike the final blow at Japan. This military power is sustained and inspired by the determination of all allied nations to prosecute the war against Japan until she ceases to resist.

3. The result of the futile and senseless German resistance to the might of the aroused free peoples of the world stands forth in awful clarity as an example to the people of Japan.

The might that now converges on Japan is immeasurably greater than that which, when applied to the resisting Nazis, necessarily laid waste to the land, the industry, and the method of life of the whole German people.

The full application of our military power, backed by our resolve, will mean the inevitable and complete destruction of the Japanese armed forces and just as inevitably the utter devastation of the Japanese homeland.

4. The time has come for Japan to decide whether she will continue to be controlled by these self-willed militaristic advisers whose unintelligent calculations have brought the empire of Japan to the threshold of annihilation, or whether she will follow the path of reason.

5. The following are our terms: we will not deviate from them; there are no alternatives; we shall brook no delay.

6. There must be eliminated for all time the authority and influence of those

who have deceived and misled the people of Japan into embarking on world conquest, for we insist that a new order of peace, security, and justice will be impossible until irresponsible militarism is driven from the world.

7. Until such a new order is established and until there is convincing proof that Japan's war-making power is destroyed, points in Japanese territory to be designated by the Allies shall be occupied to secure the achievement of the basic objectives we are here setting forth.

8. The terms of the Cairo declaration shall be carried out and Japanese sovereignty shall be limited to the Islands of Honshu, Hokkaido, Kyushu, Shikoku and such minor islands as we determine.

9. Japanese military forces after being completely disarmed shall be permitted to return to their homes with the opportunity to lead peaceful and productive lives.

10. We do not intend that the Japanese shall be enslaved as a race or destroyed as a nation, but stern justice shall be meted out to all war criminals, including those who have visited cruelties upon our prisoners.

The Japanese government shall remove all obstacles to the revival and strength-

ening of democratic tendencies among the Japanese people. Freedom of speech and religion and of thought, as well as respect for the fundamental human rights, shall be established.

11. Japan shall be permitted to maintain such industries as will sustain her economy and permit the payment of just reparation in kind, but not those industries which will enable her to rearm for war.

To this end, access to, as distinguished from control of, raw materials shall be permitted. Eventual Japanese participation in world trade relations shall be permitted.

12. The occupying forces of the Allies shall be withdrawn from Japan as soon as these objectives have been accomplished, and there has been established in accordance with the freely expressed will of the Japanese people a peacefully inclined and responsible government.

13. We call upon the government of Japan to proclaim now the unconditional surrender of all Japanese armed forces, and to provide proper and adequate assurances of their good faith in such action. The alternative for Japan is prompt and utter destruction.

## North Atlantic Treaty

Signed at Washington, D.C., April 4, 1949

The Parties to this Treaty reaffirm their faith in the purposes and principles of the Charter of the United Nations and their desire to live in peace with all peoples and all governments.

They are determined to safeguard the freedom, common heritage and civilization of their peoples, founded on the principles of democracy, individual liberty and the rule of law.

They seek to promote stability and well-being in the North Atlantic area.

They are resolved to unite their efforts for collective defense and for the preservation of peace and security.

They therefore agree to this North Atlantic Treaty:

### Article 1

The Parties undertake, as set forth in the Charter of the United Nations, to settle any international disputes in which they may be involved by peaceful means in such a manner that international peace and security, and justice, are not endangered, and to refrain in their international relations from the threat or use of force in any manner inconsistent with the purposes of the United Nations.

### Article 2

The Parties will contribute toward the further development of peaceful and friendly international relations by strength-

ening their free institutions, by bringing about a better understanding of the principles upon which these institutions are founded, and by promoting conditions of stability and well-being. They will seek to eliminate conflict in their international economic policies and will encourage economic collaboration between any or all of them.

### Article 3

In order more effectively to achieve the objectives of this Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack.

### Article 4

The Parties will consult together whenever, in the opinion of any of them, the territorial integrity, political independence or security of any of the Parties is threatened.

### Article 5

The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all; and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defense recognized by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith,

individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.

Any such armed attack and all measures taken as a result thereof shall immediately be reported to the Security Council. Such measures shall be terminated when the Security Council has taken the measures necessary to restore and maintain international peace and security.

#### Article 6

For the purpose of Article 5 an armed attack on one or more of the Parties is deemed to include an armed attack on the territory of any of the Parties in Europe or North America, on the Algerian departments of France, on the occupation forces of any Party in Europe, on the islands under the jurisdiction of any Party in the North Atlantic area north of the Tropic of Cancer or on the vessels or aircraft in this area of any of the Parties.

#### Article 7

This Treaty does not affect, and shall not be interpreted as affecting, in any way the rights and obligations under the Charter of the Parties which are members of the United Nations, or the primary responsibility of the Security Council for the maintenance of international peace and security.

#### Article 8

Each Party declares that none of the international engagements now in force between it and any other of the Parties or any third state is in conflict with the provisions of this Treaty, and undertakes not to enter into any international engagement in conflict with this Treaty.

#### Article 9

The Parties hereby establish a council, on which each of them shall be represented, to consider matters concerning the implementation of this Treaty. The council shall be so organized as to be able to meet promptly at any time. The council shall set up such subsidiary bodies as may be necessary; in particular it shall establish immediately a defense committee which shall recommend measures for the implementation of Articles 3 and 5.

#### Article 10

The Parties may, by unanimous agreement, invite any other European state in a position to further the principles of this

Treaty and to contribute to the security of the North Atlantic area to accede to this Treaty. Any state so invited may become a party to the Treaty by depositing its instrument of accession with the Government of the United States of America. The Government of the United States of America will inform each of the Parties of the deposit of each such instrument of accession.

#### Article 11

This Treaty shall be ratified and its provisions carried out by the Parties in accordance with their respective constitutional processes. The instruments of ratification shall be deposited as soon as possible with the Government of the United States of America, which will notify all the other signatories of each deposit. The Treaty shall enter into force between the states which have ratified it as soon as the ratifications of the majority of the signatories, including the ratifications of Belgium, Canada, France, Luxemburg, the Netherlands, the United Kingdom and the United States, have been deposited and shall come into effect with respect to other states on the date of the deposit of their ratifications.

#### Article 12

After the Treaty has been in force for ten years, or at any time thereafter, the Parties shall, if any of them so requests, consult together for the purpose of reviewing the Treaty, having regard for the factors then affecting peace and security in the North Atlantic area, including the development of universal as well as regional arrangements under the Charter of the United Nations for the maintenance of international peace and security.

#### Article 13

After the Treaty has been in force for twenty years, any Party may cease to be a party one year after its notice of denunciation has been given to the Government of the United States of America, which will inform the Governments of the other Parties of the deposit of each notice of denunciation.

#### Article 14

This Treaty, of which the English and French texts are equally authentic, shall be deposited in the archives of the Government of the United States of America. Duly certified copies thereof will be transmitted by that Government to the Governments of the other signatories.

### Tripartite Security Treaty

(United States, Australia, New Zealand)

Major provisions of the Tripartite agreement signed on Sept. 1, 1951, at San Francisco:

1. The parties undertake to settle by peaceful means any international disputes in which they may be involved.

2. The parties will maintain and develop their individual and collective capacity to resist armed attack.

3. The parties will consult together whenever the territorial integrity, political



independence or security of any of the parties is threatened in the Pacific.

4. Each party recognizes that an armed attack in the Pacific area on either of the other parties would be dangerous to its own peace and safety.

A Defense Treaty similar in its provisions to the Tripartite Security Treaty was signed by the United States and the Philippines in Washington, D. C., Aug 30, 1951.

## United States-Japanese Treaty

Main provisions of the U. S.-Japanese Security Treaty signed at San Francisco on Sept. 8, 1951:

1. Japan grants and the U. S. accepts the right to dispose U. S. land, air and sea forces in and about Japan. Such forces may be utilized to contribute to the maintenance of international peace and security in the Far East and to the security of Japan against armed attack from without, including assistance given at the express request of the Japanese government to put down large scale riots and disturbances in Japan caused through instigation or intervention by an outside power or powers.

5. The parties hereby establish a council, consisting of their foreign ministers or their deputies, to consider matters concerning the implementation of this treaty.

6. This treaty shall remain in force indefinitely.

2. Japan will not grant without the prior consent of the U. S. any bases or any rights, powers or authority whatsoever relating to bases, or the right of garrison or maneuver or transit of ground, air or naval forces of any third power.

3. This treaty shall expire whenever in the opinion of the governments of the U. S. and of Japan, U. N. arrangements or alternate individual or collective dispositions satisfactorily provide for the maintenance of international peace and security in the Japan area.

## Japanese Peace Treaty

The Japanese Peace Treaty was signed at San Francisco on September 8, 1951, by 49 nations; the U.S.S.R., Poland and Czechoslovakia were present but refused to sign. Among the major provisions of the treaty are the following:

**Peace:** The state of war between Japan and the Allies is terminated.

**Sovereignty:** Japan's full sovereignty is recognized as is its right to apply for U. N. membership.

**Territory:** Japan recognizes the independence of Korea; renounces all rights, titles or claims to Formosa, the Pescadores, the Kuriles, Sakhalin, the Pacific islands formerly under mandate to Japan, the Antarctic area, Spratly Island and the Paracels.

Japan agrees to U. N. trusteeship over the Ryukyu and Daito Islands, the Bonins, Rosario Island, the Volcano Islands, Parece Vela and Marcus Island. Disposition of Japanese property on these islands is to be negotiated by Japan and the administering authorities.

**Security:** Japan agrees to settle its international disputes peaceably, to refrain from the threat of or the use of force and to abide by the principles of the U. N.

All occupation forces are to be withdrawn as soon as possible but not later than 90 days after a majority of the sig-

natory countries have given notice of ratification of this treaty. Nothing in this provision shall, however, prevent the stationing or retention of foreign armed forces in Japanese territory by agreement with one or more of the Allies.

**Political-Economic Clauses:** Japan may enter into fisheries treaties; may negotiate most-favored-nation trade and maritime treaties with the Allies; renounces all special rights and interests in China.

Japan accepts the judgments of the International Military Tribunal and Allied War Crimes Courts.

**Claims and Property:** Japan recognizes its responsibility to pay reparations but the Allies recognize its limited economic capacity; therefore, Japan shall pay through goods to be manufactured in Japan from raw materials provided by the victimized nations and by services. The Allies may retain certain properties seized from Japan but require the latter to return their properties within 6 months. Japan recognizes Allied industrial, literary and artistic property rights. It agrees to indemnify prisoners of war who suffered unduly but renounces similar claims against the Allies.

**Settlement of Disputes:** Any disagreements arising out of the interpretation of this treaty and not otherwise settled shall be submitted to the International Court of Justice.

# THE DECLARATION OF INDEPENDENCE

IN CONGRESS, JULY 4, 1776

## THE UNANIMOUS DECLARATION of the thirteen united STATES OF AMERICA.

**W**HEN in the Course of human events it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of the earth, the separate and equal station to which the Laws of Nature and of Nature's God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation.

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.—That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed,—That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness. Prudence, indeed, will dictate that Governments long established should not be changed for light and transient causes; and accordingly all experience hath shewn that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when a long train of abuses and usurpations, pursuing invariably the same Object evinces a design to reduce them under absolute Despotism, it is their right, it is their duty, to throw off such Government, and to provide new Guards for their future security.—Such has been the patient sufferance of these Colonies; and such is now the necessity which constrains them to alter their former Systems of Government. The history of the present King of Great Britain is a history of repeated injuries and usurpations, all having in direct object the establishment of an absolute Tyranny over these States. To prove this, let Facts be submitted to a candid world.

He has refused his Assent to Laws, the most wholesome and necessary for the public good.

He has forbidden his Governors to pass Laws of immediate and pressing importance, unless suspended in their operation till his Assent should be obtained; and when so suspended, he has utterly neglected to attend to them.

He has refused to pass other Laws for the accommodation of large districts of people, unless those people would relinquish the right of Representation in the Legislature, a right inestimable to them and formidable to tyrants only.

He has called together legislative bodies at places unusual, uncomfortable, and distant from the depository of their Public Records, for the sole purpose of fatiguing them into compliance with his measures.

He has dissolved Representative Houses repeatedly, for opposing with manly firmness his invasions on the rights of the people.

He has refused for a long time, after such dissolutions, to cause others to be elected; whereby the Legislative Powers, incapable of Annihilation, have returned to the People at large for their exercise; the State remaining in the mean time exposed to all the dangers of invasion from without, and convulsions within.

**NOTE:** On April 12, 1776, the legislature of North Carolina authorized its delegates to the Continental Congress to join with others in a declaration of separation from Great Britain; the first colony to instruct its delegates to take the actual initiative was Virginia on May 15. On June 7, 1776, Richard Henry Lee of Virginia offered a resolution to the Congress to the effect "that these United Colonies are, and of right ought to be, free and independent States. . . ." A committee, consisting of Thomas Jefferson, John Adams, Benjamin Franklin, Robert R. Livingston and Roger

Sherman was organized to "prepare a declaration to the effect of the said first resolution." The Declaration of Independence was adopted on July 4, 1776.

Most delegates signed the Declaration August 2, but George Wythe (Va.) signed August 27; Richard Henry Lee (Va.), Elbridge Gerry (Mass.) and Oliver Wolcott (Conn.) in September; Matthew Thornton (N. H.), not a delegate until September, in November; and Thomas McKean (Del.), although present on July 4, not until 1781 by special permission, having served in the army in the interim.

He has endeavoured to prevent the population of these States; for that purpose obstructing the Laws for Naturalization of Foreigners; refusing to pass others to encourage their migrations hither, and raising the conditions of new Appropriations of Lands.

He has obstructed the Administration of Justice, by refusing his Assent to Laws for establishing Judiciary Powers.

He has made Judges dependent on his Will alone, for the tenure of their offices, and the amount and payment of their salaries.

He has erected a multitude of New Offices, and sent hither swarms of Officers to harass our people, and eat out their substance.

He has kept among us, in times of peace, Standing Armies without the Consent of our legislatures.

He has affected to render the Military independent of and superior to the Civil Power.

He has combined with others to subject us to a jurisdiction foreign to our constitution, and unacknowledged by our laws; giving his Assent to their Acts of pretended Legislation:

For quartering large bodies of armed troops among us:

For protecting them, by a mock Trial, from punishment for any Murders which they should commit on the Inhabitants of these States:

For cutting off our Trade with all parts of the world:

For imposing Taxes on us without our Consent:

For depriving us in many cases, of the benefits of Trial by Jury:

For transporting us beyond Seas to be tried for pretended offences:

For abolishing the free System of English Laws in a neighbouring Province, establishing therein an Arbitrary government, and enlarging its Boundaries so as to render it at once an example and fit instrument for introducing the same absolute rule into these Colonies:

For taking away our Charters, abolishing our most valuable Laws and altering fundamentally the Forms of our Governments:

For suspending our own Legislatures, and declaring themselves invested with power to legislate for us in all cases whatsoever.

He has abdicated Government here, by declaring us out of his Protection and waging War against us.

He has plundered our seas, ravaged our Coasts, burnt our towns, and destroyed the lives of our people.

He is at this time transporting large Armies of foreign Mercenaries to compleat the works of death, desolation and tyranny, already begun with circumstances of Cruelty & Perfidy scarcely paralleled in the most barbarous ages, and totally unworthy the Head of a civilized nation.

He has constrained our fellow Citizens taken Captive on the high Seas to bear Arms against their Country, to become the executioners of their friends and Brethren, or to fall themselves by their Hands.

He has excited domestic insurrections amongst us, and has endeavoured to bring on the inhabitants of our frontiers, the merciless Indian Savages, whose known rule of warfare, is an undistinguished destruction of all ages, sexes and conditions.

In every stage of these Oppressions We have Petitioned for Redress in the most humble terms: Our repeated Petitions have been answered only by repeated injury. A Prince, whose character is thus marked by every act which may define a Tyrant, is unfit to be the ruler of a free people.

Nor have We been wanting in attentions to our British brethren. We have warned them from time to time of attempts by their legislature to extend an unwarrantable jurisdiction over us. We have reminded them of the circumstances of our emigration and settlement here. We have appealed to their native justice and magnanimity, and we have conjured them by the ties of our common kindred to disavow these usurpations, which would inevitably interrupt our connections and correspondence. They too have been deaf to the voice of justice and of consanguinity. We must, therefore, acquiesce in the necessity, which denounces our Separation, and hold them, as we hold the rest of mankind, Enemies in War, in Peace Friends.

WE, THEREFORE, the Representatives of the UNITED STATES OF AMERICA, in General Congress, Assembled, appealing to the Supreme Judge of the world for the rectitude of our intentions, do, in the Name, and by Authority of the good People of these Colonies, solemnly publish and declare, That these United Colonies are, and of Right ought to be



FREE AND INDEPENDENT STATES; that they are Absolved from all Allegiance to the British Crown, and that all political connection between them and the State of Great Britain, is and ought to be totally dissolved; and that as Free and Independent States, they have full Power to levy War, conclude Peace, contract Alliances, establish Commerce, and to do all other Acts and Things which Independent States may of right do.—And for the support of this Declaration, with a firm reliance on the protection of Divine Providence, we mutually pledge to each other our Lives, our Fortunes and our sacred Honor.

JOHN HANCOCK.

*New Hampshire.*

Josiah Bartlett,  
Wm. Whipple,  
Matthew Thornton.

*Rhode Island.*

Step. Hopkins,  
William Ellery.

*Connecticut.*

Roger Sherman,  
Sam'l Huntington,  
Wm. Williams,  
Oliver Wolcott.

*New York.*

Wm. Floyd,  
Phil. Livingston,  
Frans. Lewis,  
Lewis Morris.

*New Jersey.*

Richd. Stockton,  
Jno. Witherspoon,  
Fras. Hopkinson,  
John Hart,  
Abra. Clark.

*Pennsylvania.*

Robt. Morris,  
Benjamin Rush,  
Benja. Franklin,  
John Morton,  
Geo. Clymer,  
Jas. Smith,  
Geo. Taylor,  
James Wilson,  
Geo. Ross.

*Massachusetts-Bay.*

Saml. Adams,  
John Adams,  
Robt. Treat Paine,  
Elbridge Gerry.

*Delaware.*

Caesar Rodney,  
Geo. Read,  
Tho. M'Kean.

*Maryland.*

Samuel Chase,  
Wm. Paca,  
Thos. Stone,  
Charles Carroll of Carrollton.

*Virginia.*

George Wythe,  
Richard Henry Lee,  
Th. Jefferson,  
Benja. Harrison,  
Ths. Nelson, Jr.,  
Francis Lightfoot Lee,  
Carter Braxton.

*North Carolina.*

Wm. Hooper,  
Joseph Hewes,  
John Penn.

*South Carolina.*

Edward Rutledge,  
Thos. Heyward, Junr.,  
Thomas Lynch, Junr.,  
Arthur Middleton.

*Georgia.*

Button Gwinnett,  
Lyman Hall,  
Geo. Walton.

IN CONGRESS

JANUARY, 18, 1777.

*Ordered:*

That an authenticated copy of the Declaration of Independency, with the names of the Members of Congress subscribing the same, be sent to each of the United States, and that they be desired to have the same put on record.

By order of Congress.

Attest, CHAS. THOMSON, *Secy.* A true copy. JOHN HANCOCK, *Presidt.*

## The Statue of Liberty

The Statue of Liberty ("Liberty Enlightening the World") is a 225-ton copper female figure, 152 ft. 5 in. in height, facing the ocean from Liberty\* Island in New York Harbor. The right hand holds aloft a torch, and the left hand carries a tablet upon which is inscribed: "July 4, 1776."

The statue was designed by Frédéric Auguste Bartholdi, at the request of the French government, as a present to the U. S. to commemorate the centennial of American independence. It cost \$450,000.

The pedestal, 151 ft. 1 in. in height, was erected by the U. S., and its cost of \$350,000 was met by popular subscription in this country. The cornerstone was laid Aug.

5, 1884, and the unveiling of the statue took place Oct. 28, 1886.

On a tablet inside the main entrance of the pedestal is engraved the following sonnet, written by Emma Lazarus:

*The New Colossus*

Not like the brazen giant of Greek fame,  
With conquering limbs astride from land to land;  
Here at our sea-washed, sunset gates shall stand  
A mighty woman with a torch, whose flame  
Is the imprisoned lightning, and her name  
Mother of Exiles. From her beacon hand  
Glows world-wide welcome; her mild eyes com-  
mand  
The air-brided harbor that twin cities frame.  
"Keep, ancient lands, your storied pomp!" cries she  
With silent lips. "Give me your tired, your poor,  
Your huddled masses yearning to breathe free,  
The wretched refuse of your teeming shore.  
Send these, the homeless, tempest-tost to me,  
I lift my lamp beside the golden door."

\* Called Bedloe's Island prior to 1956.

## CONSTITUTION of the UNITED STATES OF AMERICA

THE oldest federal constitution in existence was framed by a convention of delegates from twelve of the thirteen original states in Philadelphia in May 1787, Rhode Island failing to send a delegate. George Washington presided over the session, which lasted until September 17, 1787. The draft (originally a preamble and seven Articles) was submitted to all thirteen states and was to become effective when ratified by nine states. It went into effect on the first Wednesday in March 1789, having been ratified by New Hampshire, the ninth state to approve, on June 21, 1788. The states ratified the Constitution in the following order:

Delaware	December 7, 1787	South Carolina	May 23, 1788
Pennsylvania	December 12, 1787	New Hampshire	June 21, 1788
New Jersey	December 18, 1787	Virginia	June 25, 1788
Georgia	January 2, 1788	New York	July 26, 1788
Connecticut	January 9, 1788	North Carolina	November 21, 1789
Massachusetts	February 6, 1788	Rhode Island	May 29, 1790
Maryland	April 28, 1788		

### Outline of the Constitution

#### ARTICLE I

SEC. 1. Legislative powers; in whom vested.

SEC. 2. House of Representatives, how and by whom chosen—Qualifications of a Representative—Representatives and direct taxes, how apportioned—Enumeration—Vacancies to be filled—Power of choosing officers, and of impeachment.

SEC. 3. Senators, how and by whom chosen—How classified—State Executive, when to make temporary appointments, in case, etc.—Qualifications of a Senator—President of the Senate, his right to vote—President pro tem., and other officers of the Senate, how chosen—Power to try impeachments—When President is tried, Chief Justice to preside—Sentence.

SEC. 4. Times, etc., of holding elections, how prescribed—At least one Session in each year.

SEC. 5. Membership—Quorum—Adjournments—Rules—Power to punish or expel—Journal—Time of adjournments, how limited, etc.

SEC. 6. Compensation—Privileges—Disqualification in certain cases.

SEC. 7. House to originate all revenue bills—Veto—Bill may be passed by two-thirds of each house, notwithstanding, etc.—Bill, not returned in ten days, to become a law—Provisions as to orders, concurrent resolutions, etc.

SEC. 8. Powers of Congress.

SEC. 9. Provision as to migration or importation of certain persons—Habeas Corpus—Bills of attainder, etc.—Taxes, how apportioned—No export duty—No commercial preference—Money, how drawn from treasury, etc.—No titular nobility—Officers not to receive presents, etc.

SEC. 10. States prohibited from the exercise of certain powers.

#### ARTICLE II

SEC. 1. President; his term of office—Electors of President; number and how appointed—Electors to vote on same day—Qualification of President—On whom his duties devolve in case of his removal or death, etc.—President's compensation—His oath of office.

SEC. 2. President to be commander in chief—He may require opinions of Cabinet Officers, etc., may pardon—Treaty-making power—Nomination of certain officers—When President may fill vacancies.

SEC. 3. President shall communicate to Congress—He may convene and adjourn Congress, in case of disagreement, etc.—Shall receive ambassadors, execute laws, and commission officers.

SEC. 4. All civil offices forfeited for certain crimes.

#### ARTICLE III

SEC. 1. Judicial powers—Tenure—Compensation.

SEC. 2. Judicial power; to what cases it extends—Original jurisdiction of Supreme Court—Appellate—Trial by jury, etc.—Trial, where.

SEC. 3. Treason defined—Proof of—Punishment of.

#### ARTICLE IV

SEC. 1. Each State to give credit to the public acts, etc., of every other State.

SEC. 2. Privileges of citizens of each State—Fugitives from justice to be delivered up—Persons held to service having escaped, to be delivered up.

SEC. 3. Admission of new States—Power of Congress over territory and other property.

SEC. 4. Republican form of government guaranteed—Each State to be protected.

## ARTICLE V

Constitution; how amended—Proviso.

## ARTICLE VI

Certain debts, etc., declared valid—Supremacy of Constitution, treaties, and laws of the United States—Oath to support Constitution, by whom taken—No religious test.

## ARTICLE VII

What ratification shall establish Constitution.

## AMENDMENTS

- I. Religious establishment prohibited—Freedom of speech, of the press, and right to petition.
- II. Right to keep and bear arms.
- III. No soldier to be quartered in any house, unless, etc.
- IV. Right of search and seizure regulated.
- V. Provisions concerning prosecution, trial and punishment—Private property not to be taken for public use, without compensation.
- VI. Further provision respecting criminal prosecutions.
- VII. Right of trial by jury secured.

VIII. Excessive bail or fines and cruel punishments prohibited.

IX. Rule of construction of Constitution.

X. Same subject; rights of States.

XI. Same subject; judicial powers construed.

XII. Manner of choosing President and Vice President.

XIII. Slavery abolished.

XIV. Citizenship; representation—Public debt.

XV. Right of suffrage—By whom exercised.

XVI. Taxes on incomes.

XVII. Election of Senators—Filling of vacancies.

XVIII. Prohibition.

XIX. Suffrage; not to be denied because of sex.

XX. Commencement of terms of President, Vice President and members of Congress; time of assembling of Congress.

XXI. Repeal of Prohibition.

XXII. No person to serve as President for more than two terms.

## The Constitution of the United States of America

**PREAMBLE.**—WE THE PEOPLE of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

## ARTICLE I

## Section 1

Legislative powers vested in Congress.—All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

## Section 2

Composition of the House of Representatives.—1. The House of Representatives shall be composed of Members chosen every second Year by the People of the several States, and the Electors in each State shall have the Qualifications requisite for Electors of the most numerous Branch of the State Legislature.

Qualifications of Representatives.—2. No Person shall be a Representative who shall not have attained to the Age of twenty-five Years, and been seven Years a Citizen

of the United States, and who shall not, when elected, be an Inhabitant of that State in which he shall be chosen.

Apportionment of Representatives and direct taxes—census.\*—3. [Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons.] The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to chuse three, Massachusetts eight, Rhode-Island and Providence Plantations one, Connecticut five, New York six, New Jersey four, Pennsylvania eight, Delaware one, Maryland six, Virginia ten, North Carolina five, South Carolina five, and Georgia three.

Filling of vacancies in representation.—

4. When vacancies happen in the Representation from any State, the Executive

\* The clause included in brackets is amended by the 14th Amendment, Section 2.



Authority thereof shall issue Writs of Election to fill such Vacancies.

**Selection of officers; power of impeachment.**—5. The House of Representatives shall choose their Speaker and other Officers; and shall have the sole Power of Impeachment.

### Section 3\*

**The Senate.**—[1. The Senate of the United States shall be composed of two Senators from each State, chosen by the Legislature thereof, for six Years; and each Senator shall have one Vote.]

**Classification of Senators; filling of vacancies.**—2. Immediately after they shall be assembled in Consequence of the first Election, they shall be divided as equally as may be into three Classes. The Seats of the Senators of the first Class shall be vacated at the Expiration of the second Year, of the second Class at the Expiration of the fourth Year, and of the third Class at the Expiration of the sixth Year, so that one-third may be chosen every second Year; and if Vacancies happen by Resignation, or otherwise, during the Recess of the Legislature of any State, the Executive thereof may make temporary Appointments [until the next Meeting of the Legislature, which shall then fill such Vacancies].

**Qualification of Senators.**—3. No Person shall be a Senator who shall not have attained to the Age of thirty Years, and been nine Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State for which he shall be chosen.

**Vice President to be President of Senate.**—4. The Vice President of the United States shall be President of the Senate, but shall have no Vote, unless they be equally divided.

**Selection of Senate officers; President pro tempore.**—5. The Senate shall choose their other Officers, and also a President pro tempore, in the Absence of the Vice President, or when he shall exercise the Office of President of the United States.

**Senate to try impeachments.**—6. The Senate shall have the sole Power to try all Impeachments. When sitting for that Purpose, they shall be on Oath or Affirmation. When the President of the United States is tried, the Chief Justice shall preside: And no Person shall be convicted without the Concurrence of two thirds of the Members present.

**Judgment in cases of impeachment.**—7. Judgment in Cases of Impeachment shall not extend further than to removal from Office, and disqualification to hold and en-

joy any Office of honor, Trust, or Profit under the United States: but the Party convicted shall nevertheless be liable and subject to Indictment, Trial, Judgment and Punishment, according to Law.

### Section 4

**Control of congressional elections.**—1. The Times, Places and Manner of holding Elections for Senators and Representatives shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations, except as to the Places of choosing Senators.

**Time for assembling of Congress.**†—2. The Congress shall assemble at least once in every Year, and such Meeting shall be on the first Monday in December, unless they shall by Law appoint a different Day.

### Section 5

**Each house to be the judge of the election and qualifications of its members; regulations as to quorum.**—1. Each House shall be the Judge of the Elections, Returns and Qualifications of its own Members, and a Majority of each shall constitute a Quorum to do Business; but a smaller Number may adjourn from day to day, and may be authorized to compel the Attendance of absent Members, in such Manner, and under such Penalties as each House may provide.

**Each house to determine its own rules.**—2. Each House may determine the Rules of its Proceedings, punish its Members for disorderly Behaviour, and, with the Concurrence of two thirds, expel a Member.

**Journals and yeas and nays.**—3. Each House shall keep a Journal of its Proceedings, and from time to time publish the same, excepting such Parts as may in their Judgment require Secrecy; and the Yeas and Nays of the Members of either House on any question shall, at the Desire of one fifth of those Present, be entered on the Journal.

**Adjournment.**—4. Neither House, during the Session of Congress shall, without the Consent of the other, adjourn for more than three days, nor to any other Place than that in which the two Houses shall be sitting.

### Section 6

**Compensation and privileges of Members of Congress.**—1. The Senators and Representatives shall receive a Compensation for their Services, to be ascertained by Law, and paid out of the Treasury of the United States. They shall in all Cases, except Treason, Felony and Breach of the

\* The 1st paragraph of this section and as much of the 2nd paragraph as relates to filling vacancies are amended by the 17th Amendment.

† Amended by the 20th Amendment, Section 2.

Peace, be privileged from Arrest during their Attendance at the Session of their respective Houses, and in going to and returning from the same; and for any Speech or Debate in either House, they shall not be questioned in any other Place.

**Incompatible offices; exclusions.—2.** No Senator or Representative shall, during the Time for which he was elected, be appointed to any civil Office under the Authority of the United States, which shall have been created, or the Emoluments whereof shall have been increased during such time; and no Person holding any Office under the United States, shall be a Member of either House during his Continuance in Office.

### Section 7

**Revenue bills to originate in House.—1.** All Bills for raising Revenue shall originate in the House of Representatives; but the Senate may propose or concur with Amendments as on other Bills.

**Manner of passing bills; veto power of President.—2.** Every Bill which shall have passed the House of Representatives and the Senate, shall, before it becomes a Law, be presented to the President of the United States; If he approve he shall sign it, but if not he shall return it, with his Objections to that House in which it shall have originated, who shall enter the Objections at large on their Journal, and proceed to reconsider it. If after such Reconsideration two thirds of that House shall agree to pass the Bill, it shall be sent, together with the Objections, to the other House, by which it shall likewise be reconsidered, and if approved by two thirds of that House, it shall become a Law. But in all such Cases the Votes of both Houses shall be determined by Yeas and Nays, and the Names of the Persons voting for and against the Bill shall be entered on the Journal of each House respectively. If any Bill shall not be returned by the President within ten Days (Sundays excepted) after it shall have been presented to him, the Same shall be a Law, in like Manner as if he had signed it, unless the Congress by their Adjournment prevent its Return, in which Case it shall not be a Law.

**Concurrent orders or resolutions, to be passed by President.—3.** Every Order, Resolution, or Vote to which the Concurrence of the Senate and House of Representatives may be necessary (except on a question of adjournment) shall be presented to the President of the United States; and before the Same shall take Effect, shall be approved by him, or being disapproved by him, shall be repassed by two thirds of the Senate and House of Representatives, according to the Rules and Limitations prescribed in the Case of a Bill.

### Section 8

#### General powers of Congress.\*

**The Congress shall have Power.—1.** To lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defence and general Welfare of the United States; but all Duties, Imposts and Excises shall be uniform throughout the United States;

**Borrowing of money.—2.** To borrow Money on the credit of the United States;

**Regulation of commerce.—3.** To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes;

**Naturalization and bankruptcy.—4.** To establish a uniform Rule of Naturalization, and uniform Laws on the subject of Bankruptcies throughout the United States;

**Money, weights and measures.—5.** To coin Money, regulate the Value thereof, and of foreign Coin, and fix the Standard of Weights and Measures;

**Counterfeiting.—6.** To provide for the Punishment of counterfeiting the Securities and current Coin of the United States;

**Post offices.—7.** To establish Post Offices and post Roads;

**Patents and copyrights.—8.** To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;

**Inferior courts.—9.** To constitute Tribunals inferior to the supreme Court;

**Piracies and felonies.—10.** To define and punish Piracies and Felonies committed on the high Seas, and Offences against the Law of Nations;

**War; marque and reprisal.—11.** To declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water;

**Armies.—12.** To raise and support Armies, but no Appropriation of Money to that Use shall be for a longer Term than two Years;

**Navy.—13.** To provide and maintain a Navy;

**Land and naval forces.—14.** To make Rules for the Government and Regulation of the land and naval Forces;

**Calling out militia.—15.** To provide for calling forth the Militia to execute the Laws of the Union, suppress Insurrections and repel Invasions;

**Organizing, arming and disciplining militia.—16.** To provide for organizing, arming, and disciplining, the Militia, and for governing such Part of them as may be

\* By the 16th Amendment, Congress is given the power to lay and collect taxes on incomes.

employed in the Service of the United States, reserving to the States respectively, the Appointment of the Officers, and the Authority of training the Militia according to the discipline prescribed by Congress;

**Exclusive legislation over District of Columbia.**—17. To exercise exclusive Legislation in all Cases whatsoever, over such District (not exceeding ten Miles square) as may, by Cession of particular States, and the Acceptance of Congress, become the Seat of the Government of the United States, and to exercise like Authority over all Places purchased by the Consent of the Legislature of the State in which the Same shall be, for the Erection of Forts, Magazines, Arsenals, dock-Yards, and other needful Buildings;—And

To enact laws necessary to enforce Constitution.—18. To make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department or Officer thereof.

#### Section 9

**Migration or importation of certain persons not to be prohibited before 1808.**—1. The Migration or Importation of such Persons as any of the States now existing shall think proper to admit, shall not be prohibited by the Congress prior to the Year one thousand eight hundred and eight, but a Tax or duty may be imposed on such Importation, not exceeding ten dollars for each Person.

**Writ of habeas corpus not to be suspended; exception.**—2. The Privilege of the Writ of Habeas Corpus shall not be suspended, unless when in Cases of Rebellion or Invasion the public Safety may require it.

**Bills of attainder and ex post facto laws prohibited.**—3. No Bill of Attainder or ex post facto Law shall be passed.

**Capitation and other direct taxes.**—4. No Capitation, or other direct, Tax shall be laid, unless in Proportion to the Census or Enumeration herein before directed to be taken.\*

**Exports not to be taxed.**—5. No Tax or Duty shall be laid on Articles exported from any State.

**No preference to be given to ports of any State; interstate shipping.**—6. No Preference shall be given by any Regulation of Commerce or Revenue to the Ports of one State over those of another: nor shall Vessels bound to, or from, one State, be obliged to enter, clear, or pay Duties in another.

**Money, how drawn from treasury; finan-**

cial statements to be published.—7. Money shall be drawn from the Treasury but in Consequence of Appropriations made by Law; and a regular Statement and Account of the Receipts and Expenditures of all public Money shall be published from time to time.

**Titles of nobility not to be granted; acceptance by government officers of favors from foreign powers.**—8. No Title of Nobility shall be granted by the United States: And no Person holding any Office of Profit or Trust under them, shall, without the Consent of the Congress, accept of any present, Emolument, Office, or Title of any kind whatever, from any King, Prince, or foreign State.

#### Section 10

**Limitations of the powers of the several States.**—1. No State shall enter into any Treaty, Alliance, or Confederation; grant Letters of Marque and Reprisal; coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts; pass any Bill of Attainder, ex post facto Law, or Law impairing the Obligation of Contracts, or grant any Title of Nobility.

**State imposts and duties.**—2. No State shall, without the Consent of the Congress, lay any Imposts or Duties on Imports or Exports, except what may be absolutely necessary for executing its Inspection Laws: and the net Produce of all Duties and Imposts, laid by any State on Imports or Exports, shall be for the Use of the Treasury of the United States; and all such Laws shall be subject to the Revision and Control of the Congress.

**Further restrictions on powers of States.**—3. No State shall, without the Consent of Congress, lay any Duty of Tonnage, keep Troops, or Ships of War in time of Peace, enter into any Agreement or Compact with another State, or with a foreign Power, or engage in War, unless actually invaded, or in such imminent Danger as will not admit of delay.

## ARTICLE II

#### Section 1

**The President; the executive power.**—The executive Power shall be vested in the President of the United States of America. He shall hold his Office during the Term of four Years, and, together with the Vice President, chosen for the same Term, be elected, as follows

**Appointment and qualifications of presidential electors.**—2. Each State shall appoint, in such Manner as the Legislature thereof may direct, a Number of Electors equal to the whole Number of Senators an

\* See the 16th Amendment.



Representatives to which the State may be entitled in the Congress: but no Senator or Representative, or Person holding an Office of Trust or Profit under the United States, shall be appointed an Elector.

**Original method of electing the President and Vice-President.\***—[The Electors shall meet in their respective States, and vote by Ballot for two Persons, of whom one at least shall not be an Inhabitant of the same State with themselves. And they shall make a List of all the Persons voted for, and of the Number of Votes for each; which List they shall sign and certify, and transmit sealed to the Seat of the Government of the United States, directed to the President of the Senate. The President of the Senate shall, in the Presence of the Senate and House of Representatives, open all the Certificates, and the Votes shall then be counted. The Person having the greatest Number of Votes shall be the President, if such Number be a Majority of the whole Number of Electors appointed; and if there be more than one who have such Majority, and have an equal Number of Votes, then the House of Representatives shall immediately chuse by Ballot one of them for President; and if no person have a Majority, then from the five highest on the List the said House shall in like Manner chuse the President. But in chusing the President, the Votes shall be taken by States, the Representation from each State having one Vote; A quorum for this Purpose shall consist of a Member or Members from two thirds of the States, and a Majority of all the States shall be necessary to a Choice. In every Case, after the Choice of the President, the Person having the greatest Number of Votes of the Electors shall be the Vice President. But if there should remain two or more who have equal Votes, the Senate should chuse from them by Ballot the Vice President.]

Congress may determine time of choosing electors and day for casting their votes.—3. The Congress may determine the Time of chusing the Electors, and the Day on which they shall give their Votes; which Day shall be the same throughout the United States.

**Qualifications for the office of President.†**—4. No Person except a natural born Citizen, or a Citizen of the United States, at the time of the Adoption of this Constitution, shall be eligible to the Office of President; neither shall any Person be eligible to that Office who shall not have attained to the Age of thirty five Years, and been fourteen Years a Resident within the United States.

**Filling vacancy in the office of Presi-**

**dent.‡—5.** In Case of the Removal of the President from Office, or of his Death, Resignation, or Inability to discharge the Powers and Duties of the said Office, the same shall devolve on the Vice President, and the Congress may by Law provide for the Case of Removal, Death, Resignation or Inability, both of the President and Vice President, declaring what Officer shall then act as President, and such Officer shall act accordingly, until the Disability be removed, or a President shall be elected.

**Compensation of the President.—6.** The President shall, at stated Times, receive for his Services, a Compensation, which shall neither be increased nor diminished during the Period for which he shall have been elected, and he shall not receive within that Period any other Emolument from the United States, or any of them.

**Oath to be taken by the President.—7.** Before he enter on the Execution of his Office, he shall take the following Oath or Affirmation:—"I do solemnly swear (or affirm) that I will faithfully execute the Office of President of the United States, and will to the best of my Ability, preserve, protect and defend the Constitution of the United States."

## Section 2

**The President to be commander-in-chief of army and navy and head of executive departments; may grant reprieves and pardons.—1.** The President shall be Commander in Chief of the Army and Navy of the United States, and of the Militia of the several States, when called into the actual Service of the United States; he may require the Opinion, in writing, of the principal Officer in each of the executive Departments, upon any subject relating to the Duties of their respective Offices, and he shall have Power to grant Reprieves and Pardons for Offences against the United States, except in Cases of Impeachment.

**President may, with concurrence of Senate, make treaties, appoint ambassadors, etc.; appointment of inferior officers, authority of Congress over.—2.** He shall have Power, by and with the Advice and Consent of the Senate, to make Treaties, provided two thirds of the Senators present concur; and he shall nominate, and by and with the Advice and Consent of the Senate, shall appoint Ambassadors, other public Ministers and Consuls, Judges of the supreme Court, and all other Officers of the United States, whose Appointments are not herein otherwise provided for, and which shall be established by Law: but the Congress may by Law vest the Appointment of such inferior Officers, as they think proper, in the President alone, in

\* This clause has been superseded by the 12th Amendment.

† For qualifications of the Vice President, see 12th Amendment.

‡ Amended by the 20th Amendment, Sections 3 and 4.

the Courts of Law, or in the Heads of Departments.

President may fill vacancies in office during recess of Senate.—3. The President shall have Power to fill up all Vacancies that may happen during the Recess of the Senate, by granting Commissions which shall expire at the End of their next Session.

#### Section 3

President to give advice to Congress; may convene or adjourn it on certain occasions; to receive ambassadors, etc.; have laws executed and commission all officers.—He shall from time to time give to the Congress Information of the State of the Union, and recommend to their Consideration such Measures as he shall judge necessary and expedient; he may, on extraordinary Occasions, convene both Houses, or either of them, and in Case of Disagreement between them, with Respect to the Time of Adjournment, he may adjourn them to such Time as he shall think proper; he shall receive Ambassadors and other public Ministers; he shall take Care that the Laws be faithfully executed, and shall Commission all the Officers of the United States.

#### Section 4

All civil officers removable by impeachment.—1. The President, Vice President and all civil Officers of the United States, shall be removed from Office on Impeachment for, and Conviction of, Treason, Bribery, or other high Crimes and Misdemeanors.

### ARTICLE III

#### Section 1

Judicial powers; how vested; term of office and compensation of judges.—The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish. The Judges, both of the supreme and inferior Courts, shall hold their Offices during good Behaviour, and shall, at stated Times, receive for their Services, a Compensation, which shall not be diminished during their Continuance in Office.

#### Section 2

Jurisdiction of Federal courts.\*—1. The judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority;—to all Cases affecting Ambassadors, other public Ministers and Consuls;—to all Cases of Admiralty and maritime Jurisdiction;—to Controversies to which the United States shall be a Party;—to Controversies between two or more States;—between a State and

Citizens of another State;—between Citizens of different States,—between Citizens of the same State claiming Lands under Grants of different States, and between a State, or the Citizens thereof, and foreign States, Citizens or Subjects.

Original and appellate jurisdiction of Supreme Court.—2. In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be Party, the supreme Court shall have original Jurisdiction. In all the other Cases before mentioned, the supreme Court shall have appellate Jurisdiction, both as to Law and Fact, with such Exceptions, and under such Regulations as the Congress shall make.

Trial of all crimes, except impeachment, to be by jury.—3. The Trial of all Crimes, except in Cases of Impeachment, shall be by Jury; and such Trial shall be held in the State where the said Crimes shall have been committed; but when not committed within any State, the Trial shall be at such Place or Places as the Congress may by Law have directed.

#### Section 3

Treason defined; conviction of.—1. Treason against the United States, shall consist only in levying War against them, or, in adhering to their Enemies, giving them Aid and Comfort. No Person shall be convicted of Treason unless on the Testimony of two Witnesses to the same overt Act, or on Confession in open Court.

Congress to declare punishment for treason; proviso.—2. The Congress shall have power to declare the Punishment of Treason, but no Attainder of Treason shall work Corruption of Blood, or Forfeiture except during the Life of the Person attainted.

### ARTICLE IV

#### Section 1

Each State to give full faith and credit to the public acts and records of other States.—Full Faith and Credit shall be given in each State to the public Acts, Records, and judicial Proceedings of every other State. And the Congress may by general Laws prescribe the Manner in which such Acts, Records and Proceedings shall be proved, and the Effect thereof.

#### Section 2

Privileges of citizens.—1. The Citizens of each State shall be entitled to all Privileges and Immunities of Citizens in the several States.

Extradition between the several States.—2. A Person charged in any State with Treason, Felony, or other Crime, who shall flee from Justice, and be found in another State, shall on Demand of the executive

\* This section is abridged by the 11th Amendment.

Authority of the State from which he fled, be delivered up, to be removed to the State having Jurisdiction of the Crime.

Persons held to labor or service in one State, fleeing to another, to be returned.\*  
—3. No Person held to Service or Labour in one State, under the Laws thereof, escaping into another, shall, in Consequence of any Law or Regulation therein, be discharged from such Service or Labour, but shall be delivered up on Claim of the Party to whom such Service or Labour may be due.

### Section 3

New States.—1. New States may be admitted by the Congress into this Union; but no new State shall be formed or erected within the Jurisdiction of any other State; nor any State be formed by the Junction of two or more States, or Parts of States, without the Consent of the Legislatures of the States concerned as well as of the Congress.

Regulations concerning territory.—2. The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States; and nothing in this Constitution shall be so construed as to Prejudice any Claims of the United States, or of any particular State.

### Section 4

Republican form of government and protection guaranteed the several States.—The United States shall guarantee to every State in this Union a Republican Form of Government, and shall protect each of them against Invasion; and on Application of the Legislature, or of the Executive (when the Legislature cannot be convened) against domestic Violence.

## ARTICLE V

Ways in which the Constitution can be amended.—The Congress, whenever two thirds of both Houses shall deem it necessary, shall propose Amendments to this Constitution, or, on the Application of the Legislatures of two thirds of the several States, shall call a Convention for proposing Amendments, which, in either Case, shall be valid to all Intents and Purposes, as Part of this Constitution, when ratified by the Legislatures of three fourths of the several States, or by Conventions in three fourths thereof, as the one or the other Mode of Ratification may be proposed by the Congress; Provided that no Amendment which may be made prior to the Year One thousand eight hundred and eight shall in any Manner affect the first and fourth Clauses in the Ninth Section of the first Article; and that no State, without its Consent, shall be deprived of its equal Suffrage in the Senate.

## ARTICLE VI

Debts contracted under the confederation secured.—1. All Debts contracted and Engagements entered into, before the Adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation.

Constitution, laws and treaties of the United States to be supreme.—2. This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

Who shall take constitutional oath; no religious test as to official qualification.—

3. The Senators and Representatives before mentioned, and the Members of the several State Legislatures, and all executive and judicial Officers, both of the United States and of the several States, shall be bound by Oath or Affirmation, to support this Constitution; but no religious Test shall ever be required as a Qualification to any Office or public Trust under the United States.

## ARTICLE VII

Constitution to be considered adopted when ratified by nine States.—The Ratification of the Conventions of nine States shall be sufficient for the Establishment of this Constitution between the States so ratifying the Same.

Done in Convention by the Unanimous Consent of the States present the Seventeenth Day of September in the Year of our Lord one thousand seven hundred and Eighty seven and of the Independence of the United States of America the Twelfth. In witness whereof We have hereunto subscribed our Names.

GO. WASHINGTON

*President and Deputy from Virginia*

### NEW HAMPSHIRE

John Langdon Nicholas Gilman

### MASSACHUSETTS

Nathaniel Gorham Rufus King

### CONNECTICUT

Wm Saml Johnson Roger Sherman

### NEW YORK

Alexander Hamilton

### NEW JERSEY

Will: Livingston Wm Paterson  
David Brearley Jona: Dayton

### PENNSYLVANIA

B Franklin Thomas Mifflin  
Robt Morris Geo. Clymer  
Thos FitzSimons Jared Ingersoll  
James Wilson Gouv Morris

### DELAWARE

Geo: Read Gunning Bedford Jun  
John Dickinson Richard Bassett  
Jaco: Broom

### MARYLAND

James McHenry Dan of St Thos Jenifer  
Danl Carroll

\* See the 13th Amendment.



## VIRGINIA

John Blair —

James Madison Jr.

## NORTH CAROLINA

Wm Blount  
Hu Williamson

Richd Dobbs Spaight

## SOUTH CAROLINA

J. Rutledge  
Charles PinckneyCharles Cotesworth Pinckney.  
Pierce Butler

## GEORGIA

William Few  
Attest: William Jackson, Secretary.

Abr Baldwin

## AMENDMENTS TO THE CONSTITUTION OF THE UNITED STATES

(Amendments I to X inclusive, popularly known as the Bill of Rights, were proposed and sent to the states by the first session of the First Congress. They became effective Dec. 15, 1791.)

## ARTICLE I

Freedom of religion, speech, of the press, and right of petition.—Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

## ARTICLE II

Right of people to bear arms not to be infringed.—A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

## ARTICLE III

Quartering of troops.—No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.

## ARTICLE IV

Persons and houses to be secure from unreasonable searches and seizures.—The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

## ARTICLE V

Trials for crimes; just compensation for private property taken for public use.—No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

## ARTICLE VI

Civil rights in trials for crimes enumerated.—In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the Assistance of Counsel for his defence.

## ARTICLE VII

Civil rights in civil suits.—In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law.

## ARTICLE VIII

Excessive bail, fines and punishments prohibited.—Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

## ARTICLE IX

Reserved rights of people.—The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

## ARTICLE X

Powers not delegated, reserved to states and people respectively.—The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

## ARTICLE XI

(The proposed amendment was sent to the states Mar. 5, 1794, by the Third Congress. It became effective Jan. 8, 1798.)

Judicial power of United States not to extend to suits against a State.—The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.

## ARTICLE XII

(The proposed amendment was sent to the states Dec. 12, 1803, by the Eighth Congress. It became effective Sept. 25, 1804.)

**Present mode of electing President and Vice-President by electors.\***—The Electors shall meet in their respective states, and vote by ballot for President and Vice-President, one of whom, at least, shall not be an inhabitant of the same state with themselves; they shall name in their ballots the person voted for as President, and in distinct ballots the person voted for as Vice-President, and they shall make distinct lists of all persons voted for as President, and of all persons voted for as Vice-President, and of the number of votes for each, which lists they shall sign and certify, and transmit sealed to the seat of the government of the United States, directed to the President of the Senate;—The President of the Senate shall, in the presence of the Senate and House of Representatives, open all the certificates and the votes shall then be counted;—The person having the greatest number of votes for President, shall be the President, if such number be a majority of the whole number of Electors appointed; and if no person have such majority, then from the persons having the highest numbers not exceeding three on the list of those voted for as President, the House of Representatives shall choose immediately, by ballot, the President. But in choosing the President, the votes shall be taken by states, the representation from each State having one vote; a quorum for this purpose shall consist of a member or members from two-thirds of the states, and a majority of all the states shall be necessary to a choice. And if the House of Representatives shall not choose a President whenever the right of choice shall devolve upon them, before the fourth day of March next following, then the Vice-President shall act as President, as in the case of the death or other constitutional disability of the President.—The person having the greatest number of votes as Vice-President, shall be the Vice-President, if such number be a majority of the whole number of Electors appointed, and if no person have a majority, then from the two highest numbers on the list, the Senate shall choose the Vice-President; a quorum for the purpose shall consist of two-thirds of the whole number of Senators, and a majority of the whole number shall be necessary to a choice. But no person constitutionally ineligible to the office of President shall be eligible to that of Vice-President of the United States.

## ARTICLE XIII

(The proposed amendment was sent to the states Feb. 1, 1865, by the Thirty-eighth Congress. It became effective Dec. 18, 1865.)

## Section 1

**Slavery prohibited.**—Neither slavery nor

involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction.

## Section 2

Congress given power to enforce this article.—Congress shall have power to enforce this article by appropriate legislation.

## ARTICLE XIV

(The proposed amendment was sent to the states June 16, 1866, by the Thirty-ninth Congress. It became effective July 28, 1868.)

## Section 1

**Citizenship defined; privileges of citizens.**

—All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

## Section 2

**Apportionment of Representatives.**—Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State, excluding Indians not taxed. But when the right to vote at any election for the choice of electors for President and Vice-President of the United States, Representatives in Congress, the Executive and Judicial officers of a State, or the members of the Legislature thereof, is denied to any of the male inhabitants of such State, being twenty-one years of age, and citizens of the United States, or in any way abridged, except for participation in rebellion, or other crime, the basis of representation therein shall be reduced in the proportion which the number of such male citizens shall bear to the whole number of male citizens twenty-one years of age in such State.

## Section 3

**Disqualification for office; removal of disability.**—No person shall be a Senator or Representative in Congress, or elector of President and Vice President, or hold any office, civil or military, under the United States, or under any State, who, having previously taken an oath, as a member of Congress, or as an officer of the United States, or as a member of any State legislature, or as an executive or judicial officer of any State, to support the Constitution of the United States, shall

\* Amended by the 20th Amendment, Sections 3 and 4.

have engaged in insurrection or rebellion against the same, or given aid or comfort to the enemies thereof. But Congress may by a vote of two-thirds of each House, remove such disability.

#### Section 4

Public debt not to be questioned; payment of debts and claims incurred in aid of rebellion forbidden.—The validity of the public debt of the United States, authorized by law, including debts incurred for payment of pensions and bounties for services in suppressing insurrection or rebellion, shall not be questioned. But neither the United States nor any State shall assume or pay any debt or obligation incurred in aid of insurrection or rebellion against the United States, or any claim for the loss or emancipation of any slave; but all such debts, obligations and claims shall be held illegal and void.

#### Section 5

Congress given power to enforce this article.—The Congress shall have power to enforce, by appropriate legislation, the provisions of this article.

### ARTICLE XV

(The proposed amendment was sent to the states Feb. 27, 1869, by the Fortieth Congress. It became effective Mar. 30, 1870.)

#### Section 1

Right of certain citizens to vote established.—The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude.

#### Section 2

Congress given power to enforce this article.—The Congress shall have power to enforce this article by appropriate legislation.

### ARTICLE XVI

(The proposed amendment was sent to the states July 12, 1909, by the Sixty-first Congress. It became effective Feb. 25, 1913.)

Taxes on income; Congress given power to lay and collect.—The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration.

### ARTICLE XVII

(The proposed amendment was sent to the states May 16, 1912, by the Sixty-second Congress. It became effective May 31, 1913.)

Election of United States Senators; filling of vacancies; qualifications of electors.

1. The Senate of the United States shall be composed of two Senators from each State, elected by the people thereof, for

six years; and each Senator shall have one vote. The electors in each State shall have the qualifications requisite for electors of the most numerous branch of the State legislatures.

2. When vacancies happen in the representation of any State in the Senate, the executive authority of such State shall issue writs of election to fill such vacancies: *Provided*, That the legislature of any State may empower the executive thereof to make temporary appointment until the people fill the vacancies by election as the legislature may direct.

3. This amendment shall not be so construed as to affect the election or term of any Senator chosen before it becomes valid as part of the Constitution.

### ARTICLE XVIII\*

(The proposed amendment was sent to the states Dec. 18, 1917, by the Sixty-fifth Congress. It was approved by three-quarters of the states by Jan. 16, 1919, and became effective Jan. 16, 1920.)

Manufacture, sale or transportation of intoxicating liquors, for beverage purposes, prohibited.—1. After one year from the ratification of this article the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited.

Congress and the several States given concurrent power to pass appropriate legislation to enforce this article.—2. The Congress and the several States shall have concurrent power to enforce this article by appropriate legislation.

Provisions of article to become operative, when adopted by three-fourths of the States.—3. This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of the several States, as provided in the Constitution, within seven years from the date of the submission hereof to the States by Congress.

### ARTICLE XIX

(The proposed amendment was sent to the states June 4, 1919, by the Sixty-sixth Congress. It became effective Aug. 26, 1920.)

The right of citizens to vote shall not be denied because of sex.—The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any States on account of sex.

Congress shall have power to enforce this article by appropriate legislation.

### ARTICLE XX

(The proposed amendment, sometimes called the "Lame Duck Amendment," was sent to the states Mar. 3, 1932, by the Seventy-second Congress. It became effective Feb. 6, 1933; but, in accordance with Section 5, Sections 1 and 2 did not go into effect until Oct. 15, 1933.)

\* Repealed by the 21st Amendment.



## Section 1

**Terms of President, Vice-President, Senators and Representatives.**—The terms of the President and Vice-President shall end at noon on the twentieth day of January, and the terms of Senators and Representatives at noon on the third day of January, of the years in which such terms would have ended if this article had not been ratified; and the terms of their successors shall then begin.

## Section 2

**Time of assembling Congress.**—The Congress shall assemble at least once in every year, and such meeting shall begin at noon on the third day of January, unless they shall by law appoint a different day.

## Section 3

**Filling vacancy in office of President.**—If, at the time fixed for the beginning of the term of the President, the President-elect shall have died, the Vice-President-elect shall become President. If a President shall not have been chosen before the time fixed for the beginning of his term, or if the President-elect shall have failed to qualify, then the Vice-President-elect shall act as President until a President shall have qualified; and the Congress may by law provide for the case wherein neither a President-elect nor a Vice-President-elect shall have qualified, declaring who shall then act as President, or the manner in which one who is to act shall be selected, and such person shall act accordingly until a President or Vice-President shall have qualified.

## Section 4

**Power of Congress in Presidential succession.**—The Congress may by law provide for the case of the death of any of the persons from whom the House of Representatives may choose a President whenever the right of choice shall have devolved upon them, and for the case of the death of any of the persons from whom the Senate may choose a Vice-President whenever the right of choice shall have devolved upon them.

## Section 5

**Time of taking effect.**—Sections 1 and 2 shall take effect on the 15th day of October following the ratification of this article.

## Section 6

**Ratification.**—This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of three-fourths of the

several States within seven years from the date of its submission.

## ARTICLE XXI

(The proposed amendment was sent to the states Feb. 20, 1933, by the Seventy-second Congress. It became effective Dec. 5, 1933.)

## Section 1

**Repeal of Prohibition Amendment.**—The eighteenth article of amendment to the Constitution of the United States is hereby repealed.

## Section 2

**Transportation of intoxicating liquors.**—The transportation or importation into any State, Territory, or possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited.

## Section 3

**Ratification.**—This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by convention in the several States, as provided in the Constitution, within seven years from the date of the submission thereof to the States by the Congress.

## ARTICLE XXII

(The proposed amendment was sent to the states Mar. 21, 1947, by the Eightieth Congress. It became effective Feb. 26, 1951.)

## Section 1

**Limit to number of terms a President may serve.**—No person shall be elected to the office of the President more than twice, and no person who has held the office of President, or acted as President, for more than two years of a term to which some other person was elected President shall be elected to the office of the President more than once. But this Article shall not apply to any person holding the office of President when this Article was proposed by the Congress, and shall not prevent any person who may be holding the office of President, or acting as President, during the term within which this Article becomes operative from holding the office of President or acting as President during the remainder of such term.

## Section 2

**Ratification.**—This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of three-fourths of the several States within seven years from the date of its submission to the States by the Congress.

## Lincoln's Gettysburg Address

The Battle of Gettysburg, one of the most noted battles of the Civil War, was fought on July 1, 2, and 3, 1863. On November 19, 1863, the field was dedicated as a national cemetery by President Lincoln in a two-minute speech that was to become immortal. At the time of its de-

livery the speech was relegated to the inside pages of the papers, while a two-hour address by Edward Everett, the leading orator of the time, caught the headlines.

The following is the text of the address revised by President Lincoln from his own notes:

**F**OURSCORE and seven years ago our fathers brought forth on this continent a new nation conceived in liberty and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final resting-place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But, in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead, who struggled here have consecrated it far above our poor power to add or detract. The world will little note nor long remember what we say here, but it can never forget what they did here. It is for us the living rather to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain, that this nation under God shall have a new birth of freedom, and that government of the people, by the people, for the people shall not perish from the earth.

## The Monroe Doctrine

The Monroe Doctrine was announced in President James Monroe's message to Congress, during his second term on December 2, 1823 in part as follows:

"In the discussions to which this interest has given rise, and in the arrangements by which they may terminate, the occasion has been deemed proper for asserting as a principle in which rights and interests of the United States are involved, that the American continents, by the free and independent condition which they have assumed and maintain, are henceforth not to be considered as subjects for future colonization by any European power. . . . We owe it, therefore, to candor and to the amicable relations existing between the United States and those powers to declare that we should consider any attempt on their part to extend their system to any portion of this hemisphere as dangerous to our peace and safety. With the existing colonies or dependencies of any European power we have not interfered and shall not interfere. But with the governments who have declared their independence and maintain it, and whose independence we have, on great consideration and on just principles, acknowledged, we could not view any interposition for the purpose of oppressing them or controlling in any other manner their destiny by any European power in any other light than as the manifestation of an unfriendly disposition toward the United States."

## Minority Presidents

Thirteen candidates have become President of the U. S. with a popular vote less than 50 per cent of the total vote cast. It should be noted, however, that in elections before 1872, presidential electors were not chosen by popular vote in all states. Adams' election in 1824 was by the House of Representatives, which chose him over Jackson, who had a plurality of both electoral and popular votes, but not a majority in the electoral college.

Besides Jackson in 1824, only two other candidates receiving the largest popular vote have failed to gain a majority in the electoral college—Samuel J. Tilden (D) in 1876 and Grover Cleveland (D) in 1888.

The "minority" Presidents follow:

Year	President	Electoral	Popular vote
		Pct.	Pct.
1824	John Q. Adams.....	31.8	29.8
1844	James K. Polk (D).....	61.8	49.3
1848	Zachary Taylor (W).....	56.2	47.3
1856	James Buchanan (D).....	58.7	45.3
1860	Abraham Lincoln (R).....	59.4	39.9
1876	Rutherford B. Hayes (R).....	50.1	47.9
1880	James A. Garfield (R).....	57.9	48.3
1884	Grover Cleveland (D).....	54.6	48.8
1888	Benjamin Harrison (R).....	58.1	47.8
1892	Grover Cleveland (D).....	62.4	46.0
1912	Woodrow Wilson (D).....	81.9	41.8
1916	Woodrow Wilson (D).....	52.1	49.3
1948	Harry S. Truman (D).....	57.1	49.5

## The Mayflower Compact

On September 6, 1620, the *Mayflower*, a sailing vessel of about 180 tons, started her memorable voyage from Plymouth, England with about 100\* pilgrims aboard, bound for Virginia to establish a private permanent colony in North America. Arriving at Provincetown, Mass., on November 11 (November 21, new style calendar),

forty-one of the passengers signed the famous "Mayflower Compact" as the boat lay at anchor in that Cape Cod harbor. A small detail of the pilgrims, led by William Bradford, assigned to select a place for permanent settlement landed at what is now Plymouth, Mass., on December 21, n.s.

The text of the compact follows:

**I**N THE NAME OF GOD, Amen. We, whose names are underwritten, the Loyal Subjects of our dread Sovereign Lord, King *James*, by the Grace of God, of *Great Britain, France and Ireland, King, Defender of the Faith, &*,

Having undertaken for the Glory of God, and Advancement of the Christian Faith, and the Honour of our King and Country, a voyage to plant the first colony in the northern Parts of Virginia; do by these Presents, solemnly and mutually in the Presence of God and one of another, covenant and combine ourselves together into a civil Body Politick, for our better Ordering and Preservation, and Furtherance of the Ends aforesaid; And by Virtue hereof to enact, constitute, and frame, such just and equal Laws, Ordinances, Acts, Constitutions and Offices, from time to time, as shall be thought most meet and convenient for the General good of the Colony; unto which we promise all due Submission and Obedience.

In WITNESS whereof we have hereunto subscribed our names at *Cape Cod* the eleventh of *November*, in the Reign of our Sovereign Lord, King *James* of *England, France and Ireland*, the eighteenth, and of *Scotland* the fifty-fourth. Anno Domini, 1620

John Carver  
Digery Priest  
William Brewster  
Edmund Margesson  
John Alden  
George Soule  
James Chilton  
Francis Cooke  
Joses Fletcher  
John Ridgate  
Christopher Martin

William Mullins  
Thomas English  
John Howland  
Stephen Hopkins  
Edward Winslow  
Gilbert Winslow  
Miles Standish  
Richard Bitteridge  
Francis Eaton  
John Tilly  
John Billington

Thomas Tinker  
Samuel Fuller  
Richard Clark  
John Allerton  
Richard Warren  
Edward L Lester  
William Bradford  
Thomas Williams  
Isaac Allerton  
Peter Brown  
John Turner

Edward Tilly  
John Craxton  
Thomas Rogers  
John Goodman  
Edward Fuller  
Richard Gardiner  
William White  
Edward Doten

\* Historians differ as to whether 100, 101, or 102 passengers were aboard.

## The Early Congresses

At the urging of Massachusetts and Virginia, the First Continental Congress met in Philadelphia on September 5, 1774, and was attended by representatives of all the colonies except Georgia. Patrick Henry of Virginia declared: "The distinctions between Pennsylvanians, New Yorkers and New Englanders are no more. I am not a Virginian but an American." This Congress, which adjourned October 26, 1774, passed intercolonial resolutions calling for extensive boycott by the colonies against British trade.

The following year, most of the delegates from the colonies were chosen by popular election to attend the Second Continental Congress, which assembled in Philadelphia on May 10. As war had already begun between the colonies and England, the chief problems before the Congress were the procuring of military supplies, the establishment of an army and proper defenses, the issuing of continental bills of credit, etc. On June 15, 1775, George Washington

was elected to command the Continental army. Congress adjourned Dec. 12, 1776.

Other Continental Congresses were held in Baltimore (1776-77), Philadelphia (1777), Lancaster, Pa. (1777), York, Pa. (1777-78) and Philadelphia (1778-81).

In 1781, the Articles of Confederation, although establishing a league of the thirteen states rather than a strong central government, provided for the continuance of Congress. Known thereafter as the Congress of the Confederation, it held sessions in Philadelphia (1781-83), Princeton, N. J. (1783), Annapolis, Md. (1783-84) and Trenton, N. J. (1784). Five sessions were held in New York City between the years 1785 and 1789.

The Congress of the United States, established by the ratification of the Constitution, held its first meeting on Mar. 4, 1789, in New York City. Several sessions of Congress were held in Philadelphia, and the first meeting in Washington, D. C., was on Nov. 17, 1800.



## Presidents of the Continental Congresses

Name	Elected	Born	Died
Peyton Randolph, Va. ....	Sept. 5, 1774	c.1721	1775
Henry Middleton, S. C. ....	Oct. 22, 1774	1717	1784
Peyton Randolph, Va. ....	May 10, 1775	c.1721	1775
John Hancock, Mass. ....	May 24, 1775	1737	1793
Henry Laurens, S. C. ....	Nov. 1, 1777	1724	1792
John Jay, N. Y. ....	Dec. 10, 1778	1745	1829
Samuel Huntington, Conn. ....	Sept. 28, 1779	1731	1796
Thomas McKean, Del. ....	July 10, 1781	1734	1817
John Hanson, Md. ....	Nov. 5, 1781	1715	1783
Elias Boudinot, N. J. ....	Nov. 4, 1782	1740	1821
Thomas Mifflin, Pa. ....	Nov. 3, 1783	1744	1800
Richard Henry Lee, Va. ....	Nov. 30, 1784	1732	1794
John Hancock, Mass.* ....	Nov. 23, 1785	1737	1793
Nathaniel Gorham, Mass. ....	June 6, 1786	1738	1796
Arthur St. Clair, Pa. ....	Feb. 2, 1787	1734	1818
Cyrus Griffin, Va. ....	Jan. 22, 1788	1748	1810

\* Resigned May 29, 1786, never having served, because of continued illness.

## The Star-Spangled Banner

Francis Scott Key, 1814

O say, can you see, by the dawn's early light,  
 What so proudly we hail'd at the twilight's last gleaming?  
 Whose broad stripes and bright stars, thro' the perilous fight,  
 O'er the ramparts we watch'd, were so gallantly streaming?  
 And the rockets' red glare, the bombs bursting in air,  
 Gave proof thro' the night that our flag was still there.  
 O say, does that star-spangled banner yet wave  
 O'er the land of the free and the home of the brave?

On the shore dimly seen thro' the mists of the deep,  
 Where the foe's haughty host in dread silence reposes,  
 What is that which the breeze, o'er the towering steep,  
 As it fitfully blows, half conceals, half discloses?  
 Now it catches the gleam of the morning's first beam,  
 In full glory reflected, now shines on the stream:  
 'T is the star-spangled banner: O, long may it wave  
 O'er the land of the free and the home of the brave!

And where is that band who so vauntingly swore  
 That the havoc of war and the battle's confusion,  
 A home and a country should leave us no more?  
 Their blood has wash'd out their foul footsteps' pollution.  
 No refuge could save the hireling and slave  
 From the terror of flight or the gloom of the grave:  
 And the star-spangled banner in triumph doth wave  
 O'er the land of the free and the home of the brave.

O thus be it ever when free-men shall stand  
 Between their lov'd home and the war's desolation;  
 Blest with vict'ry and peace, may the heav'n-rescued land  
 Praise the Pow'r that hath made and preserv'd us a nation!  
 Then conquer we must, when our cause it is just,  
 And this be our motto: "In God is our trust!"  
 And the star-spangled banner in triumph shall wave  
 O'er the land of the free and the home of the brave!

ON SEPTEMBER 13, 1814, Francis Scott Key visited the British fleet in Chesapeake Bay to secure the release of Dr. William Beanes, who had been captured after the burning of Washington, D. C. The release was secured, but Key was detained on ship overnight during the shelling of Fort McHenry, one of the forts defending Baltimore. In the morning, he was so delighted to see the American flag still flying over the fort that he began a poem to commemorate the occasion. Entitled "The Star-Spangled Banner," the poem soon attained wide popularity as sung to the tune "Anacreon in Heaven." The origin of this tune is obscure, but it may have been written by John Stafford Smith, a British composer born in 1750. "The Star-Spangled Banner" was officially made the National Anthem by Congress in 1931, although already adopted as such by the Army and Navy.

## History of the Flag

Source: *Encyclopaedia Britannica*.

**THE FIRST OFFICIAL AMERICAN** flag, the Continental or Grand Union flag, was displayed on Prospect Hill, Jan. 1, 1776, in the American lines besieging Boston. It had thirteen alternate red and white stripes, with the British Union Jack in the upper left corner.

On June 14, 1777, the Continental Congress adopted the design for a new flag, which actually was the Continental flag with the red cross of St. George and the white cross of St. Andrew replaced on the blue field by thirteen stars, one for each state. No rule was made as to the arrangement of the stars, and while they were usually shown in a circle, there were various other designs. It is uncertain when the new flag was first flown, but its first official announcement is believed to have been on Sept. 3, 1777.

The first public assertion that Betsy Ross made the first Stars and Stripes appeared in a paper read before the Historical Society of Pennsylvania on March 14, 1870, by William J. Canby, a grandson. However, Mr. Canby on later investigation found no official documents of any action by Congress on the flag before June 14, 1777. Betsy Ross' own story, according to her daughter, was that Washington, Robert Morris and George Ross, as representatives of Congress, visited her in Philadelphia in June 1776, showing her a rough draft of the flag and asking her if she could make one. However, the only actual record of the manufacture of flags by Betsy Ross is a voucher in Harrisburg, Pa., for 14 pounds

\* 11 states formally seceded, and unofficial groups in Kentucky and Missouri adopted ordinances of secession. On this basis, these two states were admitted to the Confederacy, although the official state governments remained in the Union.

and some shillings for flags for the Pennsylvania navy.

On Jan. 13, 1794, Congress voted to add two stars and two stripes to the flag in recognition of the admission of Vermont and Kentucky to the Union. By 1818, there were twenty states in the Union, and as it was obvious that the flag would soon become unwieldy, Congress voted April 18 to return to the original thirteen stripes and to indicate the admission of a new state simply by the addition of a star the following July 4. The last two stars were added July 4, 1912, for New Mexico and Arizona.

The first Confederate flag, adopted in 1861 by the Confederate convention in Montgomery, Ala., was called the Stars and Bars; but because of its similarity in colors to the American flag, there was much confusion in the Battle of Bull Run. To remedy this situation, Gen. G. T. Beauregard suggested a battle flag, which was used by the Southern armies throughout the war. The flag consisted of a red field on which was placed a blue cross of St. Andrew separated from the field by a white fillet and adorned with thirteen\* white stars for the Confederate states. In May 1863, at Richmond, an official flag was adopted by the Confederate Congress. This flag was white and twice as long as wide; the union, two-thirds the width of the flag, contained the battle flag designed for Gen. Beauregard. A broad transverse stripe of red was added Feb. 4, 1865, so that the flag might not be mistaken for a signal of truce.

## Flag Etiquette

(Public Law 829—77th Congress)

### JOINT RESOLUTION

To amend Public Law Numbered 623, approved June 22, 1942, entitled "Joint resolution to codify and emphasize existing rules and customs pertaining to the display and use of the flag of the United States of America."

*Resolved by the Senate and House of Representatives of the United States of America in Congress Assembled*, That Public Law Numbered 623, approved June 22, 1942, entitled "Joint resolution to codify and emphasize existing rules and customs pertaining to the display and use of the flag of the United States of America," be, and the same is hereby amended to read as follows:

That the following codification of existing rules and customs pertaining to the display and use of the flag of the United States of America be, and it is hereby established for the use of such civilians or civilian groups or organizations as may

not be required to conform with regulations promulgated by one or more executive departments of the Government of the United States.

SEC. 2. (a) It is the universal custom to display the flag only from sunrise to sunset on buildings and on stationary flag-staffs in the open. However, the flag may be displayed at night upon special occasions when it is desired to produce a patriotic effect.

(b) The flag should be hoisted briskly and lowered ceremoniously.

(c) The flag should not be displayed on days when the weather is inclement.

(d) The flag should be displayed on all days when the weather permits, especially on New Year's Day, January 1; Inauguration Day, January 20; Lincoln's Birthday, February 12; Washington's Birthday, Feb-

ruary 22; Army Day\*, April 6; Easter Sunday (variable); Mother's Day, second Sunday in May; Memorial Day (half-staff until noon), May 30; Flag Day, June 14; Independence Day, July 4; Labor Day, first Monday in September; Constitution Day, September 17; Columbus Day, October 12; Navy Day\*, October 27; Armistice Day, November 11†; Thanksgiving Day, fourth Thursday in November; Christmas Day, December 25; such other days as may be proclaimed by the President of the United States; the birthdays of States (dates of admission); and on State holidays.

(c) The flag should be displayed daily, weather permitting, on or near the main administration building of every public institution.

(f) The flag should be displayed in or near every polling place on election days.

(g) The flag should be displayed during school days in or near every schoolhouse.

Sec. 3. That the flag, when carried in a procession with another flag or flags, should be either on the marching right; that is, the flag's own right, or, if there is a line of other flags, in front of the center of that line.

(a) The flag should not be displayed on a float in a parade except from a staff, or as provided in subsection (i).

(b) The flag should not be draped over the hood, top, sides, or back of a vehicle or of a railroad train or a boat. When the flag is displayed on a motorcar, the staff shall be fixed firmly to the chassis or clamped to the radiator cap.

(c) No other flag or pennant should be placed above or, if on the same level, to the right of the flag of the United States of America, except during church services conducted by naval chaplains at sea, when the church pennant may be flown above the flag during church services for the personnel of the Navy.

(d) The flag of the United States of America, when it is displayed with another flag against a wall from crossed staffs, should be on the right, the flag's own right, and its staff should be in front of the staff of the other flag.

(e) The flag of the United States of America should be at the center and at the highest point of the group when a number of flags of States or localities or pennants of societies are grouped and displayed from staffs.

(f) When flags of States, cities, or localities, or pennants of societies are flown on the same halyard with the flag of the United States, the latter should always be at the peak. When the flags are flown from adjacent staffs, the flag of the United States should be hoisted first and lowered last. No such flag or pennant may be placed

above the flag of the United States or to the right of the flag of the United States.

(g) When flags of two or more nations are displayed, they are to be flown from separate staffs of the same height. The flags should be of approximately equal size. International usage forbids the display of the flag of one nation above that of another nation in time of peace.

(h) When the flag of the United States is displayed from a staff projecting horizontally or at an angle from the window sill, balcony, or front of a building, the union of the flag should be placed at the peak of the staff unless the flag is at half-staff. When the flag is suspended over a sidewalk from a rope extending from a house to a pole at the edge of the sidewalk, the flag should be hoisted out, union first, from the building.

(i) When the flag is displayed otherwise than by being flown from a staff, it should be displayed flat, whether indoors or out, or so suspended that its folds fall as free as though the flag were staffed.

(j) When the flag is displayed over the middle of the street, it should be suspended vertically with the union to the north in an east and west street or to the east in a north and south street.

(k) When used on a speaker's platform the flag, if displayed flat, should be displayed above and behind the speaker. When displayed from a staff in a church or public auditorium, if it is displayed in the chancel of a church, or on the speaker's platform in a public auditorium, the flag should occupy the position of honor and be placed at the clergyman's or speaker's right as he faces the congregation or audience. Any other flag so displayed in the chancel or on the platform should be placed at the clergyman's or speaker's left as he faces the congregation or audience. But when the flag is displayed from a staff in a church or public auditorium elsewhere than in the chancel or on the platform it shall be placed in the position of honor to the right of the congregation or audience as they face the chancel or platform. Any other flag so displayed should be placed on the left of the congregation or audience as they face the chancel or platform.

(l) The flag should form a distinctive feature of the ceremony of unveiling a statue or monument, but it should never be used as the covering for the statue or monument.

(m) The flag, when flown at half-staff, should be first hoisted to the peak for an instant and then lowered to the half-staff position. The flag should be again raised to the peak before it is lowered for the day. By "half-staff" is meant lowering the flag to one-half the distance between the top and bottom of the staff. Crep streamers may be affixed to spearheads of flag-staffs in a parade only by order of the President of the United States.

\* In 1949, Army Day and Navy Day were abandoned; Armed Forces Day is celebrated the 3rd Saturday of May. † In 1954, changed to Veterans Day.



(n) When the flag is used to cover aasket, it should be so placed that the union is at the head and over the left shoulder. The flag should not be lowered into the grave or allowed to touch the ground.

SEC. 4. That no disrespect should be shown to the flag of the United States of America, the flag should not be dipped to any person or thing. Regimental colors, state flags, and organization or institutional flags are to be dipped as a mark of honor.

(a) The flag should never be displayed with the union down save as a signal of dire distress.

(b) The flag should never touch anything beneath it, such as the ground, the floor, water, or merchandise.

(c) The flag should never be carried flat or horizontally, but always aloft and free.

(d) The flag should never be used as drapery of any sort whatsoever, never festooned, drawn back, nor up, in folds, but always allowed to fall free. Bunting of blue, white, and red, always arranged with the blue above, the white in the middle, and the red below, should be used or covering a speaker's desk, draping the front of a platform, and for decoration in general.

(e) The flag should never be fastened, displayed, used, or stored in such a manner as will permit it to be easily torn, soiled, or damaged in any way.

(f) The flag should never be used as a covering for a ceiling.

(g) The flag should never have placed upon it, nor on any part of it, nor attached to it any mark, insignia, letter, word, figure, design, picture, or drawing of any nature.

(h) The flag should never be used as a receptacle for receiving, holding, carrying, or delivering anything.

(i) The flag should never be used for advertising purposes in any manner whatsoever. It should not be embroidered on such articles as cushions or handkerchiefs and the like, printed or otherwise impressed on paper napkins or boxes or anything that is designed for temporary use and discard; or used as any portion of a costume or athletic uniform. Advertising signs should not be fastened to a staff or any yard from which the flag is flown.

(j) The flag, when it is in such condition that it is no longer a fitting emblem for display, should be destroyed in a dignified way, preferably by burning.

SEC. 5. That during the ceremony of hoisting or lowering the flag or when the flag is passing in a parade or in a review, all persons present should face the flag,

stand at attention, and salute. Those present in uniform should render the military salute. When not in uniform, men should remove the headdress with the right hand holding it at the left shoulder, the hand being over the heart. Men without hats should salute in the same manner. Aliens should stand at attention. Women should salute by placing the right hand over the heart. The salute to the flag in the moving column should be rendered at the moment the flag passes.

SEC. 6. That when the national anthem is played and the flag is not displayed, all present should stand and face toward the music. Those in uniform should salute at the first note of the anthem, retaining this position until the last note. All others should stand at attention, men removing the headdress. When the flag is displayed, all present should face the flag and salute.

SEC. 7. That the pledge of allegiance to the flag, "I pledge allegiance to the flag of the United States of America and to the Republic for which it stands, one Nation, under God,† indivisible, with liberty and justice for all," be rendered by standing with the right hand over the heart. However, civilians will always show full respect to the flag when the pledge is given by merely standing at attention, men removing the headdress. Persons in uniform shall render the military salute.

SEC. 8. Any rule or custom pertaining to the display of the flag of the United States of America, set forth herein, may be altered, modified, or repealed, or additional rules with respect thereto may be prescribed, by the Commander-in-Chief of the Army and Navy of the United States, whenever he deems it to be appropriate or desirable; and any such alteration or additional rule shall be set forth in a proclamation.

Approved, December 22, 1942.

### The American's Creed\*

"I believe in the United States of America as a government of the people, by the people, for the people; whose just powers are derived from the consent of the governed; a democracy in a republic; a sovereign Nation of many sovereign States; a perfect union, one and inseparable; established upon those principles of freedom, equality, justice, and humanity for which American patriots sacrificed their lives and fortunes.

"I therefore believe it is my duty to my country to love it; to support its Constitution; to obey its laws; to respect its flag, and to defend it against all enemies."

\* William Tyler Page, Clerk of the U. S. House of Representatives, wrote "The American's Creed" in 1917. It was accepted by the House on behalf of the American people on April 3, 1918. † The idea originated in 1892 with James H. Upham, an editor of *Youth's Companion*. The claim that Upham was also the author is disputed by some who credit Francis Bellamy. ‡ The phrase "under God" was added to the pledge on June 14, 1954.

# SCIENCE



## MEASURES AND WEIGHTS

### UNITS OF LENGTH

#### Metric System

The meter was originally intended to be one ten-millionth of the earth's quadrant, a quadrant being one-quarter of a circumference. However, because of the difficulty of determining such a length with accuracy, this definition was abandoned. The meter is now considered to be the distance at 0°C between two microscopic marks on the International Prototype Meter, a platinum-iridium bar, kept by the International Bureau of Weights and Measures at Sèvres, France, a suburb of Paris.

In 1927, the International Conference on Weights and Measures adopted a secondary definition of the meter in terms of light-waves. According to this definition, one meter is equivalent to 1,553,164.13 wave lengths of the red light from cadmium.

Unit	Comparison	English equivalent
Millimeter (mm)	.001 meter	.0394 inch
Centimeter (cm)	.01 meter	.3937 inch
Decimeter (dm)	.1 meter	3.937 inches
Meter (m)		3.2808 feet
Dekameter (dkm)	10 meters	32.8083 feet
Hectometer (hm)	100 meters	328.0833 feet
Kilometer (km)	1000 meters	.62137 mile

#### English System

According to legend, the yard was established by Henry I as the distance from the point of his nose to the end of his thumb when his arm was outstretched. The British Imperial Yard was defined in 1878 by the Weights and Measures Act as the distance at 62°F between two fine lines on gold studs sunk in a bronze bar known as the "No. 1 Standard Yard." This is equivalent to .914399 meter. In the United States, the yard is defined in terms of the meter, using as a standard the U. S. Prototype Meter. According to this definition, the yard is 3600/3937 (or .914402) meter, slightly longer than the British Imperial Yard.

Unit	Comparison	Metric equivalent
Inch (in.)		25.4001 millimeters
Foot (ft)	12 inches	.3048 meter
Yard (yd)	36 inches 3 feet	.9144 meter
Rod (rd)	16½ feet 5½ yards	5.0292 meters
Furlong (fur.)	660 feet 220 yards	201.1684 meters
Mile (mi)*	40 rods 5280 feet 1760 yards	1.6093 kilometers
	* Known as statute mile. See nautical mile under Miscellaneous Units.	
	320 rods 8 furlongs	

### UNITS OF AREA

#### Metric System

Unit	Comparison	English equivalent
Square millimeter (mm²)	.000001 m²	.0015 sq in.
Square centimeter (cm²)	.0001 m²	.155 sq in.
Square decimeter (dm²)	.01 m²	15.5 sq in.
Square meter (m²)*		10.7639 sq ft
Square dekameter (dkm²)†	100 m²	3.9537 sq rd
Square hectometer (hm²)‡	10,000 m²	2.471 acres
Square kilometer (km²)	1,000,000 m²	.3861 sq mi

\* Also known as a centare (ca).

† Also known as an are (a).

‡ Also known as a hectare (ha).

#### English System

Unit	Comparison	Metric equivalent
Square inch (sq in.)		6.4516 cm²
Square foot (sq ft)	144 sq in.	.0929 m²
Square yard (sq yd)	1296 sq in. 9 sq ft	.8361 m²
Square rod (sq rd)	272¼ sq ft 30¼ sq yds	25.293 m²
Acre	43,560 sq ft 4,840 sq yd 160 sq rd	.4047 ha
Square mile (sq mi)	27,878,400 sq ft 3,097,600 sq yd 102,400 sq rd 640 acres	2.5900 km²

### UNITS OF VOLUME

#### Metric System

Unit	Comparison	English equivalent
Cubic millimeter (mm³)	.000000001 m³	.00006 cu in.
Cubic centimeter (cm³)	.000001 m³	.061 cu in.
Cubic decimeter (dm³)	.001 m³	61.0234 cu in.
Cubic meter (m³)*		35.3145 cu ft

\* Also known as a stère (s).

#### English System

Unit	Comparison	Metric equivalent
Cubic inch (cu in.)		16.3872 cm³
Cubic foot (cu ft)	1728 cu in.	.0283 m³
Cubic yard (cu yd)	46,656 cu in. 27 cu ft	.7646 m³
Cord (cd)	128 cu ft	3.6246 m³

## UNITS OF WEIGHT OR MASS

The term *mass* denotes the amount of matter contained in an object, while the term *weight* denotes the gravitational pull of the earth on the object. For practical purposes, the two terms are synonymous.

### Metric System

The gram was originally intended to be equal to the mass of one cubic centimeter of pure water at 4°C. However, because of

the difficulty of making exact measurement, a small error was made; and it has since been found that a kilogram of pure water occupies 1.000028 cubic decimeters. The standard for the kilogram is a platinum-iridium cylinder, called the International Prototype Kilogram, which is kept at the International Bureau of Weights and Measures in France.

Unit	Comparison	Avdp.	English equivalents	
			Troy	Apoth.
Milligram (mg)	.001 gram	.0154 grain	.0154 grain	.0154 grain
Centigram (cg)	.01 gram	.1543 grain	.1543 grain	.1543 grain
Decigram (dg)	.1 gram	1.5432 grains	1.5432 grains	1.5432 grains
Gram (g)		.0353 ounce	.0322 ounce	.0322 ounce
Dekagram (dkg)	10 grams	.3527 ounce	.3215 ounce	.3215 ounce
Hectogram (hg)	100 grams	3.5274 ounces	3.2151 ounces	3.2151 ounces
Kilogram (kg)	1000 grams	2.2046 pounds	2.6792 pounds	2.6792 pounds
Metric ton (t)	1000 kg	1.1023 tons*		

\* Short tons. A metric ton is equivalent to .9842 long ton.

### English System

The English System is complicated by the existence of three different kinds of weight: *avoirdupois weight*, used for common purposes; *troy weight*, used for weighing gold, silver, etc.; and *apothecaries weight*, used for making up medical prescriptions.

The British Imperial Pound (avoirdupois) is defined as the mass of a pure plat-

inum cylinder kept by the Standards Department of the Board of Trade. In the United States, the pound (avoirdupois) is defined in terms of the kilogram, using as a standard the U. S. Prototype Kilogram. According to this definition, the pound is equal to .4535924277 kilogram, making it infinitesimally smaller than the British Imperial Pound.

### Avoirdupois Weight

Unit	Comparison	Metric equivalent
Grain		.0648 gram
Dram (dr avdp)	27.3438 grains	1.7718 grams
Ounce (oz avdp)	16 drams	28.3495 grams
	437.5 grains	
Pound (lb avdp)	7000 grains	4536 kilogram
	256 drams	
	16 ounces	
Hundredweight (cwt)*	100 pounds	45.3592 kilograms
Ton (tn)†	2000 pounds	.9072 metric ton

\* Known as the short hundredweight, which is in use in the United States and Canada. Great Britain uses the long hundredweight (112 lb or 50.8024 kg).

† Known as the short ton, which is in use in the United States and Canada. Great Britain uses the long ton (2240 lb or 1.01605 metric tons).

### Troy Weight

Unit	Comparison	Metric equivalent
Grain		.0648 gram
Pennyweight (dwt)	24 grains	1.5552 grams
Ounce (oz t)	480 grains	31.1035 grams
	20 pennyweights	
Pound (lb t)*	5760 grains	.3732 kilogram
	240 pennyweights	
	12 ounces	

\* Declared illegal in Great Britain.

### Apothecaries Weight

Unit	Comparison	Metric equivalent
Grain		.0648 gram
Scruple (s ap or ℥)	20 grains	1.296 grams
Dram (dr ap or ℥)	60 grains	3.8879 grams
	3 scruples	
Ounce (oz ap or ℥)	480 grains	31.1035 grams
	24 scruples	
	8 drams	
Pound (lb ap)	5760 grains	.3732 kilogram
	288 scruples	
	96 drams	
	12 ounces	

## UNITS OF CAPACITY

### Metric System

The liter is a secondary unit of capacity defined as the volume occupied by one kilogram of pure water at 4°C. It was intended that the liter should exactly equal one cubic decimeter, but as an error was made in measurement, has since been found to equal 1.000028 cubic decimeters.

Unit	Comparison	English equivalents	
		Liquid	Dry
Milliliter (ml)	.001 liter	.0338 fl oz	.0018 pt
Centiliter (cl)	.01 liter	.3381 fl oz	.0182 pt
Deciliter (dl)	.1 liter	3.3815 fl oz	.1816 pt
Liter (l)		1.0567 qt	.9081 qt
Dekaliter (dkl)	10 liters	2.6418 gal	1.1351 pk
Hectoliter (hl)	100 liters	26.4178 gal	2.8378 bu



## English System

In Great Britain, the standard unit of capacity for measuring both liquid and dry commodities is the British Imperial Gallon. It is defined as the volume of ten pounds of pure water at 62°F and contains 277.418 cubic inches. The bushel is defined as eight gallons (2218.192 cubic inches).

In the United States, there are two separate standards. The unit for measuring liquids is the gallon, which is defined as 231 cubic inches; the unit for measuring dry commodities is the bushel, which is defined as 2150.42 cubic inches.

## Liquid Measure (U. S.)

Unit	Comparison	Cubic inches	Metric equivalent
Minim (min or m)*		.0038	.0616 ml
Fluid dram (fl dr)	60 min	.2256	3.6966 ml
Fluid ounce (fl oz)	8 fl dr	1.8047	29.5729 ml
Gill (gi)	32 fl dr	7.2188	118.292 ml
	4 fl oz		
Pint (pt)	16 fl oz	28.875	.4732 liter
	4 gi		
Quart (qt)	32 fl oz	57.75	.9463 liter
	8 gi		
	2 pt		
Gallon (gal)	32 gi	231	3.7853 liters
	8 pt		
	4 qt		

\* Approximately one drop.

## Dry Measure (U. S.)

Unit	Comparison	Cubic inches	Metric equivalent
Pint (pt)		33.6003	.5506 liter
Quart (qt)	2 pints	67.2006	1.1012 liters
Peck (pk)	16 pints	537.605	8.8096 liters
	8 quarts		
Bushel (bu)	64 pints	2150.42	35.2383 liters
	32 quarts		
	4 pecks		

## UNITS OF CIRCULAR MEASURE

Unit	Comparison
Second (")	
Minute (')	60 seconds
Degree (°)	60 minutes
Right angle	90 degrees
Straight angle	180 degrees
Circle	360 degrees

## COMMON FORMULAS

## Circumference

Circle:  $C = \pi d$ , in which  $\pi$  is 3.1416 and  $d$  the diameter.

## Area

Triangle:  $A = \frac{ab}{2}$ , in which  $a$  is the base and  $b$  the height.

Square:  $A = a^2$ , in which  $a$  is one of the sides.

Rectangle:  $A = ab$ , in which  $a$  is the base and  $b$  the height.

Trapezoid:  $A = \frac{h(a+b)}{2}$ , in which  $h$  is the height,  $a$  the longer parallel side, and  $b$  the shorter.

Regular pentagon:  $A = 1.720a^2$ , in which  $a$  is one of the sides.

Regular hexagon:  $A = 2.598a^2$ , in which  $a$  is one of the sides.

Regular octagon:  $A = 4.828a^2$ , in which  $a$  is one of the sides.

Circle:  $A = \pi r^2$ , in which  $\pi$  is 3.1416 and  $r$  the radius.

## Volume

Cube:  $V = a^3$ , in which  $a$  is one of the edges.

Rectangular prism:  $V = abc$ , in which  $a$  is the length,  $b$  the width, and  $c$  the depth.

Pyramid:  $V = \frac{Ah}{3}$ , in which  $A$  is the area of the base and  $h$  the height.

Cylinder:  $V = \pi r^2 h$ , in which  $\pi$  is 3.1416,  $r$  the radius of the base, and  $h$  the height.

Cone:  $V = \frac{\pi r^2 h}{3}$ , in which  $\pi$  is 3.1416,  $r$  the radius of the base, and  $h$  the height.

Sphere:  $V = \frac{4\pi r^3}{3}$ , in which  $\pi$  is 3.1416 and  $r$  the radius.

## Miscellaneous

Speed per second acquired by falling body:  $v = 32t$ , in which  $t$  is the time in seconds.

Distance in feet traveled by falling body:  $d = 16t^2$ , in which  $t$  is the time in seconds.

Speed of sound in feet per second through any given temperature of air:

$V = \frac{1087\sqrt{273+t}}{16.52}$ , in which  $t$  is the temperature Centigrade.

Cost per hour of operation of electrical device:  $C = \frac{Wtc}{1000}$ , in which  $W$  is the number

of watts,  $t$  the time in hours, and  $C$  the cost per kilowatt-hour.

Conversion of matter into energy (Einstein's Theorem):  $E = mc^2$ , in which  $E$  is the energy in ergs,  $m$  the mass of the matter in grams, and  $c$  the speed of light in centimeters per second. ( $c^2 = 9 \cdot 10^{20}$ ).

## Abbreviations

The National Bureau of Standards recommends that the period be omitted after all abbreviations of units unless the

abbreviation forms an English word, and that the same abbreviation be used for both singular and plural.

## FAHRENHEIT AND CENTIGRADE SCALES

Zero on the Fahrenheit scale represents the temperature produced by the mixing of equal weights of snow and common salt.

Absolute zero is theoretically the lowest possible temperature, the point at which all molecular motion would cease.

	F	C
Boiling point of water	212°	100°
Freezing point of water	32°	0°
Absolute zero	-459.6°	-273.1°

To convert Fahrenheit to Centigrade, subtract 32 and multiply by 5/9.

To convert Centigrade to Fahrenheit, multiply by 9/5 and add 32.

## ROMAN NUMERALS

Roman numerals are expressed by letters of the alphabet and are rarely used today except for formality or variety.

There are three basic principles for reading Roman numerals:

1. A letter repeated once or twice repeats its value that many times. (XXX=30, CC=200, etc.).

2. One or more letters placed after another letter of greater value increases the greater value by the amount of the smaller. (VI=6, LXX=70, MCC=1200, etc.).

3. A letter placed before another letter of greater value decreases the greater value by the amount of the smaller. (IV=4, XC=90, CM=900, etc.).

Letter	Value	Letter	Value
I	1	LX	60
II	2	LXX	70
III	3	LXXX	80
IV	4	XC	90
V	5	C	100
VI	6	D	500
VII	7	M	1,000
VIII	8	V̄	5,000
IX	9	X̄	10,000
X	10	L̄	50,000
XX	20	C̄	100,000
XXX	30	D̄	500,000
XL	40	M̄	1,000,000
L	50		

## SIMPLE INTEREST FOR \$100

To find the interest for any amount of money, move the decimal point of that amount two places to the left and multi-

ply by the figure obtained from the table.

For figuring simple interest, the year is considered to have 360 days.

	1 Day	7 Days	1 Month	3 Months	6 Months	1 Year
2%	\$.00556	\$.03889	\$.16667	\$.50000	\$1.00000	\$2.00000
2½%	.00694	.04861	.20833	.62500	1.25000	2.50000
3%	.00833	.05833	.25000	.75000	1.50000	3.00000
3½%	.00972	.06806	.29167	.87500	1.75000	3.50000
4%	.01111	.07778	.33333	1.00000	2.00000	4.00000
4½%	.01250	.08750	.37500	1.12500	2.25000	4.50000
5%	.01389	.09722	.41667	1.25000	2.50000	5.00000
5½%	.01528	.10694	.45833	1.37500	2.75000	5.50000
6%	.01667	.11667	.50000	1.50000	3.00000	6.00000
6½%	.01806	.12639	.54167	1.62500	3.25000	6.50000
7%	.01944	.13611	.58333	1.75000	3.50000	7.00000
8%	.02222	.15556	.66667	2.00000	4.00000	8.00000
9%	.02500	.17500	.75000	2.25000	4.50000	9.00000
10%	.02778	.19444	.83333	2.50000	5.00000	10.00000

## MISCELLANEOUS UNITS

**AGATE:** Originally a measurement of type size (5½ points). Now equal to 1/14 inch. Used in printing for measuring column length.

**ANGSTROM (A or λ):** .0001 micron or .0000001 mm. Used for measuring length of light waves.

**ASTRONOMICAL UNIT (A.U.):** 93,003,000 miles, the average distance of the earth from the sun. Used in astronomy.

**BALE:** A large bundle of goods. In the U. S., the approximate weight of a bale of cotton is 500 pounds. The weight varies in other countries.

- BARREL (bbl):** For liquids, 31½ gallons or 7326.5 cubic inches. For dry commodities, except cranberries: 105 dry quarts or 7056 cubic inches. For cranberries: 5826 cubic inches.
- BOARD FOOT (fbm):** 144 cubic inches (12 in. x 12 in. x 1 in.). Used for lumber.
- BOLT:** 40 yards. Used for measuring cloth.
- CABLE:** About 100 fathoms or 600 feet. Used for measuring lengths of cable.
- CARAT (c):** 200 milligrams or 3.086 grains troy. Originally the weight of a seed of the carob tree in the Mediterranean region. Used for weighing precious stones. Also a measure of the purity of gold alloy, indicating how many parts out of 24 are pure. Eighteen carat gold, for example, is ¾ pure.
- CHAIN (ch):** a chain 66 feet or one-tenth of a furlong in length, divided into 100 parts called links. One mile is equal to 80 chains. Used in surveying and sometimes called Gunter's chain.
- CUBIT:** 18 inches or 45.72 cm. Derived from distance between elbow and tip of middle finger.
- ELL, ENGLISH:** 1¼ yards or 1/32 bolt. Used for measuring cloth.
- FATHOM (fath):** 6 feet or 1.8288 m. Derived from the distance to which a man can stretch his arms. Used for measuring cables and depths of water.
- FREIGHT TON (also called MEASURE-MENT TON):** 40 cubic feet of merchandise. Used for cargo freight.
- GREAT GROSS:** 12 gross or 1728.
- GROSS:** 12 dozen or 144.
- HAND:** 4 inches or 10.16 cm. Derived from the width of the hand. Used for measuring the height of horses at withers.
- HOGSHEAD (hhd):** 2 liquid barrels or 14,653 cubic inches.
- HORSEPOWER:** The power needed to lift 33,000 pounds a distance of one foot in one minute (about 1½ times the power an average horse can exert). Used for measuring the power of steam engines, etc.
- KNOT:** Not a distance, but the rate of speed of one nautical mile per hour. Used for measuring speed of ships.
- LEAGUE:** Rather indefinite and varying measure, but usually estimated at 3 miles in English-speaking countries.
- LIGHT-YEAR:** 5,880,000,000,000 miles, the distance light travels in a year at the rate of 186,272 miles per second. (If an astronomical unit were represented by one inch, a light-year would be represented by about one mile.) Used for measurements in interstellar space.
- LINK:** One-hundredth of a chain or 7.92 inches. Used in surveying.
- MAGNUM:** Two-quart bottle. Used for measuring wine, etc.
- MICRON (μ):** .001 millimeter. Used for scientific measurements.
- MIL:** .001 inch. Used for measuring size of wire. The area of a cross-section of wire is usually expressed in circular mils, a circular mil being the area of a circle one mil in diameter. A wire one inch in diameter has a cross-section area of one million circular mils.
- MILLIMICRON (mμ):** .001 micron or .000001 mm. Used for scientific measurements.
- NAUTICAL MILE (also called GEOGRAPHICAL or SEA MILE):** Equal to a minute or 1/21600 of a great circle of the earth. Length varies in different countries. In Great Britain, it is 6080 feet or 1853.2 meters, and in the United States, it is 6080.2 feet or 1853.248 meters. The International Hydrographic Bureau proposed in 1929 a length of 1852 meters or 6076.097 feet, which has been adopted by several countries.
- PARSEC:** Approximately 3.26 light-years or 19.2 trillion miles. Term is combination of first syllables of *parallax* and *second*, and distance is that of imaginary star when lines drawn from it to both earth and sun form a maximum angle or parallax of one second (1/3600 degree). Used for measuring interstellar distances.
- PI (π):** 3.14159265+. The ratio of the circumference of a circle to its diameter. For practical purpose, the value is used to four decimal places: 3.1416.
- PICA:** ½ inch or 12 points. Used in printing for measuring column width, etc.
- PIPE:** 2 hogsheads. Used for measuring wine and other liquids.
- POINT:** .013837 (approximately 1/72) inch or 1/12 pica. Used in printing for measuring type size.
- QUINTAL:** 100,000 grams or 220.46 pounds avoirdupois.
- QUIRE:** Used for measuring paper. Sometimes 24 sheets but more often 25. There are 20 quires in a ream.
- REAM:** Used for measuring paper. Sometimes 480 sheets, but more often 500 sheets.
- SCORE:** 20 units.
- SPAN:** 9 inches or 22.86 cm. Derived from the distance between the end of the thumb and the end of the little finger when both are outstretched.
- STONE:** Legally 14 pounds avoirdupois in Great Britain.
- TOWNSHIP:** U. S. land measurement of almost 36 square miles. The south border is 6 miles long. The east and west borders, also 6 miles long, follow the meridians, making the north border slightly less than six miles long. Used in surveying.
- TUN:** 252 gallons, but often larger. Used for measuring wine and other liquids.



DECIMAL EQUIVALENTS OF COMMON FRACTIONS

$\frac{1}{2}$	.5000	$\frac{1}{32}$	.0313	$\frac{3}{41}$	.2727	$\frac{6}{11}$	.5455
$\frac{1}{3}$	.3333	$\frac{1}{64}$	.0156	$\frac{4}{5}$	.8000	$\frac{7}{8}$	.8750
$\frac{1}{4}$	.2500	$\frac{2}{3}$	.6667	$\frac{4}{7}$	.5714	$\frac{7}{9}$	.7778
$\frac{1}{5}$	.2000	$\frac{2}{5}$	.4000	$\frac{4}{9}$	.4444	$\frac{7}{10}$	.7000
$\frac{1}{6}$	.1667	$\frac{2}{7}$	.2857	$\frac{4}{11}$	.3636	$\frac{7}{11}$	.6364
$\frac{1}{7}$	.1429	$\frac{2}{9}$	.2222	$\frac{5}{6}$	.8333	$\frac{7}{12}$	.5833
$\frac{1}{8}$	.1250	$\frac{2}{11}$	.1818	$\frac{5}{7}$	.7143	$\frac{8}{9}$	.8889
$\frac{1}{9}$	.1111	$\frac{3}{4}$	.7500	$\frac{5}{8}$	.6250	$\frac{8}{11}$	.7273
$\frac{1}{10}$	.1000	$\frac{3}{5}$	.6000	$\frac{5}{9}$	.5556	$\frac{9}{10}$	.9000
$\frac{1}{11}$	.0909	$\frac{3}{7}$	.4286	$\frac{5}{11}$	.4545	$\frac{9}{11}$	.8182
$\frac{1}{12}$	.0833	$\frac{3}{8}$	.3750	$\frac{5}{12}$	.4167	$\frac{10}{11}$	.9091
$\frac{1}{16}$	.0625	$\frac{3}{10}$	.3000	$\frac{6}{7}$	.8571	$\frac{11}{12}$	.9167

Handy Conversion Factors

To change	To	Multi- ply by
acres	hectares	.4047
bushels (U. S.)	hectoliters	.3524
centimeters	inches	.3937
cubic feet	cubic meters	.0283
cubic meters	cubic feet	35.3145
cubic meters	cubic yards	1.3079
cubic yards	cubic meters	.7646
feet	meters	.3048
gallons (U. S.)	liters	3.7853
grains	grams	.0648
grams	grains	15.4324
grams	ounces avdp.	.0353
hectares	acres	2.4710
hectoliters	bushels (U. S.)	2.8378
inches	millimeters	25.4001
inches	centimeters	2.5400
kilograms	pounds ap or t	2.6792
kilograms	pounds avdp.	2.2046
kilometers	miles	.6214
liters	gallons (U. S.)	.2642
liters	pecks	.1135
liters	pints (dry)	1.8162
liters	pints (liquid)	2.1134
liters	quarts (dry)	.9081
liters	quarts (liquid)	1.0567
meters	feet	3.2808
meters	yards	1.0936
metric tons	tons (long)	.9842
metric tons	tons (short)	1.1023
miles	kilometers	1.6093
millimeters	inches	.0394
ounces avdp.	grams	28.3495
pecks	liters	8.8096
pints (dry)	liters	.5506
pints (liquid)	liters	.4732
pounds ap or t	kilograms	.3732
pounds avdp.	kilograms	.4536
quarts (dry)	liters	1.1012
quarts (liquid)	liters	.9463
square feet	square meters	.0929
square meters	square feet	10.7639
square meters	square yards	1.1960
square yards	square meters	.8361
tons (long)	metric tons	1.0160
tons (short)	metric tons	.9072
yards	meters	.9144

Perfect Squares and Cubes, 1 to 2025

Number	Square root	Cube root	Number	Square root	Cube root
1	1	1	512	..	8
4	2	..	529	23	..
8	..	2	576	24	..
9	3	..	625	25	..
16	4	..	676	26	..
25	5	..	729	27	9
27	..	3	784	28	..
36	6	..	841	29	..
49	7	..	900	30	..
64	8	4	961	31	..
81	9	..	1000	..	10
100	10	..	1024	32	..
121	11	..	1089	33	..
125	..	5	1156	34	..
144	12	..	1225	35	..
169	13	..	1296	36	..
196	14	..	1331	..	11
216	..	6	1369	37	..
225	15	..	1444	38	..
256	16	..	1521	39	..
289	17	..	1600	40	..
324	18	..	1681	41	..
343	..	7	1728	..	12
361	19	..	1764	42	..
400	20	..	1849	43	..
441	21	..	1936	44	..
484	22	..	2025	45	..

Mean and Median

The mean, also called the average, of a series of quantities is obtained by finding the sum of the quantities and dividing it by the number of quantities. In the series 1,3,5,18,19,20,25, the mean or average is 13 —i.e., 91 divided by 7.

The median of a series is that point which so divides it that half the quantities are on one side, half on the other. In the above series, the median is 18.

The median often better expresses the common-run, since it is not, as is the mean, affected by an excessively high or low figure. In the series 1,3,4,7,55, the median of 4 is a truer expression of the common-run than is the mean of 14.

## Calories and Vitamins of Selected Foods

Source: U. S. Dept. of Agriculture, Agriculture Handbook No. 8 (June 1950).

Food and (amount) <sup>1</sup>	Energy; calories	Vitamin A value, Int. Units	Thiamine, mg.	Riboflavin, mg.	Niacin, mg.	Ascorbic acid, mg.
Apples (1 medium R).....	76	120	.05	.04	.2	6
Bacon: medium fat (2 sl. C).....	97	(0)	.08	.05	.8	0
Bananas (1 medium R).....	88	430	.04	.05	.7	10
Beans: snap, green (1 cup C) <sup>2</sup> .....	27	830	.09	.12	.6	18
Beef: sirloin <sup>3</sup> (3 oz. C).....	257	30	.06	.16	4.1	0
Beets: red, diced (1 cup C).....	68	30	.03	.07	.5	11
Bread: rye (1 sl.).....	57	0	.04	.02	.4	(0)
Bread: white, enriched <sup>4</sup> (1 sl.).....	63	0	.06	.04	.5	(0)
Bread: wholewheat (1 sl.).....	55	0	.07	.03	.7	(0)
Butter (1 tbs.).....	100	460 <sup>5</sup>	...	...	...	(0)
Buttermilk: cultured <sup>6</sup> (1 cup).....	86	10	.09	.43	.3	3
Cabbage (1 cup R).....	24	80	.06	.05	.3	50
Carrots: diced (1 cup C).....	44	18,130	.07	.07	.7	6
Cheese: Swiss (1 oz.).....	105	410	trace	(.11)	(trace)	(0)
Cheese: cottage <sup>6</sup> (1 cup).....	215	(50)	.04	.69	(.2)	(0)
Chicken: roasters <sup>7</sup> (4 oz. R).....	227	460	.09	.18	9.1	(0)
Chocolate: unsweetened (1 oz.).....	143	20	.01	.06	.3	(0)
Corn (1 ear C).....	84	390 <sup>8</sup>	.11	.10	1.4	8
Crackers: graham (2 medium).....	55	(0)	.04	.02	.2	(0)
Cream: light (½ pt.).....	489	1,980	.07	.34	.2	3
Eggs: poached (1).....	77	540	.04	.12	trace	0
Flour: wheat, enriched <sup>9</sup> (1 cup).....	401	(0)	.48	.29	3.8	(0)
Grapefruit (½ medium).....	75	20	.07	.04	.4	76
Ham: smoked <sup>3</sup> (3 oz. C).....	339	(0)	.46	.18	3.5	0
Hamburger (3 oz. C).....	316	40	.07	.16	4.1	0
Honey (1 tbs.).....	62	(0)	trace	.01	trace	1
Ice cream (1/7 qt. brick).....	167	420	.03	.15	.1	1
Lamb: leg roast <sup>3</sup> (3 oz. C).....	230	...	.12	.21	4.4	0
Lemons (1 medium).....	20	0	.03	trace	.1	31
Liver: calf (3 oz. R).....	120	19,130	.18	2.65	13.7	30
Macaroni: enriched (1 cup C).....	209	(0)	.24	.15	2.0	(0)
Margarine <sup>10</sup> (1 tbs.).....	101	460	...	...	...	(0)
Milk: fluid, whole (1 cup).....	166	(390)	.09	.42	.3	3
Molasses: cane, medium (1 tbs.).....	46	...	...	.02	.2	...
Oatmeal (1 cup C).....	148	(0)	.22	.05	.4	(0)
Oranges (1 medium).....	70	(290)	.12	.04	.4	77
Oysters <sup>11</sup> (1 cup R).....	200	770	.35	.48	2.8	...
Peaches (1 medium R).....	46	880	.02	.05	.9	8
Peanut butter (1 tbs.).....	92	0	.02	.02	2.6	(0)
Peanuts: roasted, chopped (1 tbs.).....	50	0	.03	.01	1.5	(0)
Peas: green, immature (1 cup C).....	111	1,150	.40	.22	3.7	24
Plums (1 R).....	29	200	.04	.02	.3	3
Pork: loin <sup>3</sup> (3 oz. C).....	284	(0)	.71	.20	4.3	0
Potatoes: white (1 cup mashed <sup>12</sup> ).....	159	50	.16	.10	1.7	14
Prunes: unsulfured <sup>13</sup> (1 cup C).....	310	2,210	.07	.20	2.0	2
Raisins: unsulfured (1 tbs.).....	26	trace	.02	.01	trace	trace
Rice: white (1 cup C).....	201	(0)	.02	.01	.7	(0)
Round steak <sup>3</sup> (3 oz. C).....	197	20	.06	.19	4.7	0
Salmon: pink, canned (3 oz.).....	122	60	.03	.16	6.8	(0)
Sausage: pork, canned (4 oz.).....	340	(0)	.23	.27	3.4	0
Spaghetti: enriched (1 cup C).....	218	(0)	.25	.15	2.1	(0)
Spinach (1 cup C).....	46	21,200	.14	.36	1.1	54
Sugar: granulated (1 tsp.).....	16	(0)	(0)	(0)	(0)	(0)
Sweetpotatoes (1 baked).....	183	11,410 <sup>14</sup>	.12	.08	.9	28
Tomatoes (1 medium R).....	30	1,640	.08	.06	.8	35
Turkey: medium fat (4 oz. R).....	304	...	.10	.16	9.1	(0)
Turnips: diced (1 cup C).....	42	trace	.06	.09	.6	28
Veal cutlet <sup>3</sup> (3 oz. C).....	184	...	.07 <sup>15</sup>	.24 <sup>15</sup>	5.2 <sup>15</sup>	0

<sup>1</sup> R—raw; C—cooked. <sup>2</sup> Cooked short time in small amount of water. <sup>3</sup> Boneless. <sup>4</sup> 4% nonfat milk solids. <sup>5</sup> Year-round average. <sup>6</sup> Made from skim milk. <sup>7</sup> Bone out. Vitamin values based on muscle meat only. <sup>8</sup> Based on yellow corn; white corn contains only a trace. <sup>9</sup> Patent. <sup>10</sup> Vitamin A added. <sup>11</sup> Meat only. <sup>12</sup> If very pale varieties only were used, value would be much lower. <sup>13</sup> Milk added. <sup>14</sup> No sugar added. <sup>15</sup> Data assume cut to be prepared by braising or pot roasting. Use of proportionate quantity of drippings would add approximately 50% more thiamine and niacin and 25% more riboflavin.

NOTE: Parentheses denote imputed values. The sign . . . shows that no basis could be found for imputing a value although there was some reason to believe that a measurable amount might be present.

## Chemical Elements

Source: Professor Philip S. Chen, Atlantic Union College.

Atomic number	Element	Symbol	Atomic weight	Density gm/cc	Melting point °C.	Boiling point °C.	Valence*	Number of isotopes†	Discoverer	Date discovered
1	Hydrogen	H	1.0080	0.07†	-259.14	-252.7	1	3	Cavendish	1766
2	Helium	He	4.003	0.15†	<-272.2	-268.9	0	4	Ramsay	1895
3	Lithium	Li	6.940	0.534	186.	>1200.	1	5	Arfvedson	1817
4	Beryllium*** (Glucinum)	Be	9.013	1.84	1350.	1500.	2	4	Vauquelin	1798
5	Boron	B	10.82	2.535§	2300.	2500.	3	5	Gay-Lussac and Thénard; Davy	1808
6	Carbon	C	12.010	2.25**	>3500.	4200.	2, 3 or 4	6	Prehistoric	....
7	Nitrogen	N	14.008	0.810†	-209.86	-195.3	3 or 5	6	Rutherford	1772
8	Oxygen	O	16.0000	1.14†	-218.4	-183.00	2	6	Priestley	1774
9	Fluorine	F	19.00	1.14†	-223.	-187.	1	4	Moissan	1886
10	Neon	Ne	20.183	0.90035 (g/10°C. 760mm)	-248.67	-245.9	0	5	Ramsay and Travers	1898
11	Sodium	Na	22.997	0.9287†	97.5	880.	1	6	Davy	1807
12	Magnesium	Mg	24.32	1.741	651.	1110.	2	6	Davy	1808
13	Aluminum	Al	26.98	2.699†	660.0	1800.	3	6	Wöhler	1827
14	Silicon	Si	28.09	2.42**	1420.	2600.	4	6	Berzelius	1824
15	Phosphorus	P	30.975	1.83 (white)	44.1	280.	3 or 5	6	Brand	1669
16	Sulfur	S	32.066	2.0-1	112.8	444.6	2, 4 or 6	7	Prehistoric	....
17	Chlorine	Cl	35.457	1.507†	-101.6	-34.6	1, 3, 5 or 7	7	Scheele	1774
18	Argon	A	39.944	1.423†	-189.2	-185.7	0	8	Rayleigh and Ramsay	1894
19	Potassium	K	39.100	0.87	62.3	760.	1	8	Davy	1807
20	Calcium	Ca	40.08	1.54	810.	1170.	2	10	Davy	1808
21	Scandium	Sc	44.96	3.62 (10°C.)	1200.	2400.	3	8	Nilson	1879
22	Titanium	Ti	47.90	4.5	1800.	>3000.	3 or 4	8	Gregor	1791
23	Vanadium	V	50.95	5.69	1710.	3000.	2, 3, 4 or 5	8	Sefström	1830
24	Chromium	Cr	52.01	6.92	1615.	2200.	2, 3 or 6	8	Vauquelin	1798
25	Manganese	Mn	54.93	7.42	1260.	1900.	2, 3, 4, 6 or 7	6	Gahn	1774
26	Iron	Fe	55.85	7.85-88	1535.	3000.	2, 3 or 6	8	Prehistoric	....
27	Cobalt	Co	58.94	8.9	1480.	2900.	2 or 3	9	Brandt	1735
28	Nickel	Ni	58.71	8.60-90	1452.	2900.	2 or 3	11	Cronstedt	1751
29	Copper	Cu	63.54	8.30-95	1083.	2300.	1 or 2	10	Prehistoric	....
30	Zinc	Zn	65.38	7.04-16	419.43	907.	2	12	Marggraf	1746
31	Gallium	Ga	69.72	5.903	29.75	>1600.	2 or 3	11	Boisbaudran	1875
32	Germanium	Ge	72.60	5.46	958.5	2700.	4	13	Winkler	1886
33	Arsenic	As	74.91	5.73	814. (36 atm.)	615.	3 or 5	11	Albertus Magnus	1250§
34	Selenium	Se	78.96	4.3-8	220.	688.	2, 4 or 6	14	Berzelius	1818
35	Bromine	Br	79.916	3.12†	-7.2	58.78	1, 3, 5 or 7	15	Balard	1826
36	Krypton	Kr	83.80	2.16†	-169.	-151.8	0	19	Ramsay and Travers	1898
37	Rubidium	Rb	85.48	1.532	38.5	700.	1	16	Bunsen and Kirchhoff	1861
38	Strontium	Sr	87.63	2.50-58	800.	1150.	2	16	Davy	1808
39	Yttrium	Y	88.92	3.80	1490.	2500.	3	15	Gadolín	1794
40	Zirconium	Zr	91.22	6.44	1700.	>2900.	4	12	Klaproth	1789
41	Niobium*** (Columbium)	Nb	92.91	8.4	1950.	>3300.	3 or 5	10	Hatchett	1801
42	Molybdenum	Mo	95.95	9.01	2620±10	3700.	2, 3, 4, 5 or 6	13	Hjelm	1781
43	Technetium	Tc	98.	11.487	2300.	.....	2, 3, 4 or 5	12¶¶	Perrier and Segrè	1937
44	Ruthenium	Ru	101.7	12.06	2450.	>2700.	3, 4, 6 or 8	13	Klaus	1844
45	Rhodium	Rh	102.91	12.44	1955.	>2500.	3	10	Wollaston	1803
46	Palladium	Pd	106.4	12.16 (20°C.)	1555.	2200.	2 or 4	13	Wollaston	1803
47	Silver	Ag	107.880	10.503††	960.5	1950.	1	13	Prehistoric	....
48	Cadmium	Cd	112.41	8.648	320.9	767.	2	14	Stromeyer	1817
49	Indium	In	114.82	7.28	155.	1450.	1 or 3	13	Reich and Richter	1863
50	Tin	Sn	118.70	7.29	231.83	2260.	2 or 4	18	Prehistoric	....
51	Antimony	Sb	121.76	6.618	630.5	1380.	3 or 5	16	Prehistoric	....
52	Tellurium	Te	127.61	6.25**	452.	1390.	2, 4, or 6	17	von Reichenstein	1782
53	Iodine	I	126.91	4.94	113.5	184.35	1, 3, 5 or 7	18	Courtois	1811



Atomic number	Element	Symbol	Atomic weight	Density gm/cc	Melting point °C.	Boiling point °C.	Valence*	Number of isotopes†	Discoverer	Date discovered
54	Xenon	Xe	131.3	3.52†	-140.	-109.1	0	23	Ramsay and Travers	1898
55	Cesium	Cs	132.91	1.873	26.	670.	1	18	Bunsen and Kirchhoff	1860
56	Barium	Ba	137.36	3.78	850.	1140.	2	17	Davy	1808
57	Lanthanum	La	138.92	6.5	826.	1800.	3	15	Mosander	1839
58	Cerium	Ce	140.13	6.9	770.	1400.	3 or 4	14	Klaproth; Berzelius and Hisinger	1803
59	Praseodymium	Pr	140.92	6.475	940.	.....	3, 4 or 5	9	Auer von Welsbach	1885
60	Neodymium	Nd	144.27	6.96	840.	.....	3	13	Auer von Welsbach	1885
61	Promethium	Pm	147.	.....	.....	.....	3	12††	Marinsky and Glendenin	1945
62	Samarium	Sm	150.35	7.7-8	1350.	.....	2 or 3	14	Boisbaudran	1879
63	Europium	Eu	152.0	5.24	1100.	.....	2 or 3	12	Demarcay	1901
64	Gadolinium	Gd	157.26	7.95	.....	.....	3	13	Marignac	1880
65	Terbium	Tb	159.2	8.33	.....	.....	3 or 4	10	Mosander	1843
66	Dysprosium	Dy	142.51	8.56	.....	.....	3	10	Boisbaudran	1886
67	Holmium	Ho	164.94	8.76	.....	.....	3	7	Soret	1878
68	Erbium	Er	167.2	7.77 (†)	1250(†)	.....	3	9	Mosander	1843
69	Thulium	Tm	169.4	9.34	.....	.....	3	6	Cleve	1879
70	Ytterbium	Yb	173.04	9.01	1800.	.....	3	10	Marignac	1878
71	Lutetium	Lu	174.99	9.74	.....	.....	3 or 4	8	Urbain	1907
72	Hafnium	Hf	178.50	13.3	1700.	3200.	4	11	Coster and von Hevesy	1923
73	Tantalum	Ta	180.88	16.6	2850.	4100.	3 or 5	9	Ekeberg	1802
74	Tungsten	W	183.86	18.6-19.1	3370.	5900.	2, 4, 5 or 6	12	d'Elhuyar	1783
75	Rhenium	Re	186.22	20.53 (20°C.)	3000.	.....	4	7	Noddack and Berg	1925
76	Osmium	Os	190.2	22.5	2700.	5300.	2, 3, 4 or 8	13	Tennant	1804
77	Iridium	Ir	193.1	22.42	2350.	4800.	3 or 4	7	Tennant	1804
78	Platinum	Pt	195.09	21.37	1755.	4300.	2 or 4	9	De Ulloa	1748
79	Gold	Au	197.2	19.3††	1063.0	2600.	1 or 3	12	Prehistoric	....
80	Mercury	Hg	200.61	13.596†	-38.87	356.90	1 or 2	14	Prehistoric	....
81	Thallium	Tl	204.39	11.86	303.5	1650.	1 or 3	13	Crookes	1861
82	Lead	Pb	207.21	11.347††	327.5	1620.	2 or 4	15	Prehistoric	....
83	Bismuth	Bi	209.00	9.80	271.	1450.	3 or 5	17	Geoffroy	1753
84	Polonium	Po	210.0	.....	.....	.....	.....	19	Curie	1898
85	Astatine	At	211.	.....	470.	.....	1, 3, 5 or 7	15	Corson et al	1940
86	Radon	Rn	222.	9.739†	-71.	-61.8	0	12	Dorn	1900
87	Francium	Fr	223.	.....	23.	.....	1	10	Perey	1939
88	Radium	Ra	226.05	6.0	960.	1140.	2	12	Curie	1898
89	Actinium	Ac	227.	.....	.....	.....	3	8	Debierne	1899
90	Thorium	Th	232.12	11.13	1845.	3000.	4	13	Berzelius	1828
91	Protactinium	Pa	231.	.....	.....	.....	5	10	Hahn and Meitner	1917
92	Uranium	U	238.07	18.7	1850.	3927.	3, 4 or 6	14	Klaproth	1789
93	Neptunium	Np	239.	17.7	.....	.....	3, 4, 5 or 6	11††	McMillan and Abelson	1940
94	Plutonium	Pu	238.	.....	.....	.....	3, 4, 5 or 6	11††	Seaborg et al	1940
95	Americium	Am	241.	11.7	>850.	.....	3	8††	Seaborg et al	1944
96	Curium	Cm	242.	.....	.....	.....	3	8††	Seaborg et al	1944
97	Berkelium	Bk	243.	.....	.....	.....	3 or 4	3††	Seaborg et al	1950
98	Californium	Cf	244.	.....	.....	.....	3	2††	Seaborg et al	1950
99	Einsteinium	E	253.	.....	.....	.....	3	1††	Ghiorso et al	1954
100	Fermium	Fm	255.	.....	.....	.....	3	1††	Studier et al	1954
101	Mendelevium	Mv	256.	.....	.....	.....	3	1††	Ghiorso et al	1955

\* VALENCE is a measure of the extent to which an atom is able to combine directly with others.

† Isotopes are different forms of the same element, having the same atomic number but different atomic weights. The number of isotopes given includes only those that are stable and natural occurring, excluding those marked ††.

‡ Liquid. § Amorphous. ¶ Graphite. \*\* Crystalline. †† Compressed. ‡‡ Cast. §§ Exact date doubtful --born 1193 and died 1280. ¶¶ Have been artificially produced. \*\*\* New name adopted by International Union of Chemistry, replacing old name in parentheses. < Is less than. > Is greater than.

Figures in parentheses are tentative or theoretical.

The number of isotopes of each element is increased by discovery or by manufacture.

# Scientific Inventions, Discoveries and Theories

Source: *Encyclopaedia Britannica*.

## Inventions

**Adding machine, recording:** William S. Burroughs, 1888.

**Airplane:** Wilbur and Orville Wright, 1903.

**Air brake, railroad:** George Westinghouse, 1868.

**Air pump:** Otto von Guericke, 1650.

**Automobile:** (Product of inventions of many men. Gottlieb Daimler is frequently given credit, c.1887.)

**Bakelite:** Leo H. Baekeland, 1908.

**Balloon, hot-air:** Joseph and Jacques Montgolfier, 1783.

**Barometer:** Evangelista Torricelli, 1643.

**Camera, Kodak:** George Eastman, 1888.

**Carburetor, spray:** Charles E. Duryea, 1892.

**Cellophane:** J. E. Brandenberger, 1912.

**Celluloid:** John W. Hyatt, 1870.

**Clock, pendulum:** Christian Huygens, 1656.

**Converter, Bessemer:** William Kelly, 1851. (Patent bought by Sir Henry Bessemer, who made a similar invention in 1856.)

**Cotton gin:** Eli Whitney, 1793.

**Cyanide:** Nikodem Caro and Adolf Frank, 1905.

**Cyclotron:** Ernest O. Lawrence, 1931.

**Daguerreotype process:** Louis J. M. Daguerre, 1839.

**Diesel engine:** Rudolf Diesel, 1897.

**Dynamite:** Alfred B. Nobel, 1862.

**Dynamo:** Michael Faraday, 1831.

**Dynamo, industrial:** Zénobe Gramme, 1872.

**Electromagnet:** William Sturgeon, 1823.

**Electroplating:** Luigi Brugnatelli, 1805.

**Elevator, passenger:** Elisha G. Otis, 1857.

**Elevator safety device:** Elisha G. Otis, 1852.

**Engine, high-speed internal-combustion:** Gottlieb Daimler, 1885.

**Filament, tungsten:** Irving Langmuir, 1915.

**Flying shuttle:** John Kay, 1733.

**Food preservation, hermetically sealed:** François Appert, 1804.

**Fountain pen:** Lewis E. Waterman, 1884. (First successful one.)

**Frequency modulation (FM):** Edwin H. Armstrong, 1933.

**Guncotton:** Christian Schönbein, 1845.

**Gyrocompass:** Elmer A. Sperry, 1905.

**Gyroscope:** Léon Foucault, 1852.

**Helicopter:** Louis C. Bréguet, 1909.

**Hydroplane:** Glenn H. Curtiss, 1911.

**Lamp, electric incandescent:** (Inventor uncertain; Thomas A. Edison, who made a lamp in 1879, is sometimes credited.)

**Lens, bifocal:** Benjamin Franklin, c.1760.

**Lightning rod:** Benjamin Franklin, 1752.

**Linotype machine:** Ottmar Mergenthaler, 1884.

**Lithography:** Aloys Senefelder, 1796.

**Machine gun:** Richard J. Gatling, 1861.

**Match, friction:** John Walker, 1827.

**Mercury-vapor lamp:** Peter C. Hewitt, 1912.

**Microscope, compound:** Zacharias Janssen, 1590.

**Microscope, electron:** Vladimir Zworykin et al., 1939.

**Miner's safety lamp:** Sir Humphry Davy, 1815.

**Monotype machine:** Tolbert Lanston, 1887.

**Motion pictures:** Thomas A. Edison, 1893.

**Motion pictures, sound:** (Product of various inventions. First picture with synchronized musical score: *Don Juan*, Warner Bros., 1926. First picture with spoken dialogue: *The Jazz Singer*, Warner Bros., 1927.)

**Motor, A-C:** Nikola Tesla, 1892.

**Ophthalmoscope:** Hermann von Helmholtz, 1851.

**Phonograph:** Thomas A. Edison, 1877.

**Photography, color:** Gabriel Lippmann, 1891.

**Power loom:** Edmund Cartwright, 1785.

**Printing, movable-type:** Johann Gutenberg (?), c.1440.

**Printing press, rotary:** Richard Hoe, 1847.

**Radio:** (Product of various inventions. First practical system of wireless telegraphy: Guglielmo Marconi, 1895.)

**Radio telephone:** Lee De Forest, 1906.

**Radio tube, diode:** Sir John Ambrose Fleming, 1904.

**Radio tube, triode:** Lee De Forest, 1906.

**Rayon:** Sir Joseph Swan, 1883.

**Reaper:** Cyrus McCormick, 1834.

**Revolver:** Samuel Colt, 1835.

**Rifle, automatic:** John M. Browning, 1918.

**Rubber, vulcanized:** Ch. Goodyear, 1839.

**Screw propeller:** John Ericsson, 1837.

**Self-starter, automobile:** Charles F. Kettering, 1911.

**Sewing machine:** Elias Howe, 1846.

**Spinning frame:** Sir Richard Arkwright, 1769.

**Spinning jenny:** James Hargreaves, 1764.

**Spinning mule:** Samuel Crompton, 1779.

**Steamboat:** Robert Fulton, 1807. (First commercially successful one in U. S.)

**Steam engine:** James Watt, 1765. (First practical one.)

**Tank, military:** Sir Ernest Swinton, 1914.

Telegraph, electromagnetic recording: Samuel F. B. Morse, 1837.  
 Telephone: Alexander Graham Bell, 1876.  
 Telescope: Hans Lippershey (?), c.1608.  
 Television: (Product of various inventions since 1920s and before. First commercial TV: July 1, 1941, over WNBT, New York.)  
 Thermometer: Galileo Galilei, 1593.  
 Tire, pneumatic: John B. Dunlop, 1888.  
 Tractor, caterpillar: Benjamin Holt, 1900.  
 Transformer, electric: Wm. Stanley, 1885.  
 Typewriter: Christopher Sholes, 1868.  
 (First practical one.)  
 Zeppelin: Ferdinand von Zeppelin, 1900.

### Discoveries and Theories

Adrenaline, isolation of: Jokichi Takamine, 1901.  
 Aluminum manufacture by electrolytic action: Charles M. Hall, 1886.  
 Antitoxin, diphtheria: Emil von Behring, 1890.  
 Atom smashing with slow neutrons: Enrico Fermi, 1934. (Experiment repeated by Lise Meitner and Otto Hahn in 1938.)  
 Atomic numbers: Henry Moseley, 1913.  
 Atomic theory: John Dalton, 1803.  
 Aureomycin: Benjamin M. Duggar, 1948.  
 Bacteria: Anton van Leeuwenhoek, 1675.  
 Blood, circulation of: William Harvey, 1628.  
 Classification of plants and animals: Carolus Linnaeus, 1737-53.  
 Combustion, nature of: Antoine Lavoisier, 1777.  
 Conditioned reflex: Ivan Pavlov, c.1910.  
 Deuterium (heavy hydrogen): Harold C. Urey, 1932.  
 Displacement of water, principle of: Archimedes, 3rd century B.C.  
 Electromagnetic waves: Heinrich Hertz, 1886.  
 Electron: Sir Joseph J. Thomson, 1897.  
 Electron, wave nature of: Louis Victor de Broglie, 1924.  
 Ether, first used as anesthetic: Crawford W. Long, 1842.  
 Evolution by natural selection: Charles Darwin, 1859.  
 Falling bodies, law of: Galileo Galilei, 1590.  
 Gases, laws governing: Joseph Gay-Lussac, 1809.  
 Gravitation, law of: Sir Isaac Newton, 1687.  
 Helium on sun: Sir Joseph Lockyer, 1868.  
 Heredity, laws of: Gregor Mendel, 1865.  
 Induction, electric: Joseph Henry, 1828.  
 Insulin: Sir Frederick G. Banting and J. J. R. MacLeod, 1922.  
 Intelligence testing, modern: Alfred Binet and Theodore Simon, 1905.

Isotopes, mass spectra of: Francis W. Aston, 1919.  
 Isotopes, theory of: Frederick Soddy, 1912.  
 Light, electromagnetic theory of: James Clerk Maxwell, 1873.  
 Light, velocity of: Olaus Römer, 1675.  
 Molecular hypothesis: Amadeo Avogadro, 1811.  
 Neutron: James Chadwick, 1932.  
 Ohm's Law: Georg S. Ohm, 1827.  
 Ozone: Christian Schönbein, 1839.  
 Penicillin: Sir Alexander Fleming, 1929.  
 Periodic table: Dmitri Mendeleev, 1869.  
 Positron: Carl D. Anderson, 1932.  
 Proton: Ernest Rutherford, 1919.  
 Psychoanalysis: Sigmund Freud, c.1904.  
 Quantum mechanics: Werner Heisenberg, 1925.  
 Quantum theory: Max von Planck, 1901.  
 Rabies preventive: Louis Pasteur, 1885.  
 Radioactivity: Antoine Becquerel, 1896.  
 Radioactivity, artificial: Frédéric and Irène Joliot-Curie, 1934.  
 Relativity, theories of: Albert Einstein, 1905-53.  
 Salk antipolio vaccine: Jonas E. Salk, announced successful 1955.  
 Schick test of susceptibility to diphtheria: Béla Schick, 1913.  
 Secretin, isolation of: Sir William Bayliss and Ernest Starling, 1902.  
 Soda manufacture from salt: Ernest Solvay, 1861.  
 Solar system, heliocentricity of: Nicolaus Copernicus, 1530. (Also Aristarchus of Samos, 3rd century B.C.)  
 Spectrum analysis: Robert Bunsen and Gustav Kirchhoff, 1859.  
 Sulfa drugs as bactericides: Gerhard Domagk, 1932.  
 Surgery, antiseptic: Sir Joseph Lister, 1867.  
 Tuberculosis bacillus: Robert Koch, 1882.  
 Vaccination: Edward Jenner, 1796.  
 Virus, crystalized: Wendell M. Stanley, 1935.  
 Vitamin A: Elmer V. McCollum, 1912-14.  
 Vitamin B: Elmer V. McCollum, 1915-16.  
 Vitamin C: A. Holst, 1912.  
 Vitamin D: Elmer V. McCollum, 1922.  
 Vitamin D, irradiated: Harry Steenbock, 1924.  
 Wassermann test for syphilis: August von Wassermann, 1906.  
 Water, synthesis of: Henry Cavendish, 1781.  
 Wilson Cloud Chamber: Charles T. R. Wilson, 1911.  
 X-rays: Wilhelm Roentgen, 1895.



## The Races of Mankind

by PROFESSOR WILTON MARION KROGMAN  
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Classification of Man into groups called "races" rests upon the basic fact that all peoples belong to the same genus and species, *Homo sapiens*. This is important to keep in mind, for it implies that all peoples are much more alike than different.

Scientists classify Man by using a number of physical traits, most of them based upon observation rather than upon precise measurement (blood-groups are an exception). Examples of these are stature and head-form (determined by a breadth/length ratio), skin color, hair color, form and texture, eye color, nose shape, mouth form, shape of face with special reference to cheekbones. Other criteria, such as arm and leg proportions, are more specialized. Two things are noteworthy: (1) most physical traits are external; (2) physical traits are so variable that a single trait has virtually no diagnostic value.

We may define a *race* as a sub-group of Mankind more or less set apart by a heritable combination of physical traits.

There are three, possibly four, great aggregates of races, usually called *stocks*: Caucasoid, Mongoloid, Negroid, and Archaic Caucasoid (or Australoid). The first three are often referred to as "White," "Yellow," and "Black." This is not really correct; peoples of North-Central India are Caucasoids, yet their skin color is brown to dark brown; certain tribes of Northeast Africa are Negroids, yet their skin color is light brown to brown. Variability also may be seen in stature: the tallest people in the world are found in Denmark and the Scottish Highlands, in East Africa, and in southernmost South America—respectively Caucasoid, Negroid, and Mongoloid. It must be re-emphasized that not one or two traits, but an aggregate of traits, of genetic origin, provides the only valid method of setting up stock or racial classification.

Caucasoids are the peoples of Europe, the adjacent shores of North Africa, and of Asia Minor and the northern half of India. The following races belong to the Caucasoid stock: Nordic, or Northwest European, Alpine or Central European, Mediterranean or Southwest European, Baltic or Northeast European, Dinaric or Southeast European, Armenoid in western Asia Minor, and Indic (often called Hindu) in North-Central India. These races are not, of course, absolutely limited to those geographical areas. For example, the Mediterranean race is found also in North Africa, especially Egypt, and in Asia Minor, where it is represented by the Bedouin Arabs of Arabia. Other Caucasoid peoples are the Magyars, the Finns, and the Lapps, who show traces of Mongoloid mixtures, especially the last.

The Negroids are the peoples of Africa and Oceania, termed respectively the African Negroids and the Oceanic Negroids. The following African Negroid races are commonly recognized: Forest or West African or "True" Negro in West Africa. Sudanic in Central Africa, Nilotic in East Africa, Hamitic in Northeast and North Africa, Bantu (better: Bantu-speaking) in South Africa, and Bushman-Hottentot in the Kalahari Desert of South Africa. The Oceanic Negroids are commonly called Melanesian or Papuan, and are found chiefly in Borneo, New Caledonia, the Solomons, the Hebrides and Fiji.

Of special interest among Negroids are Pygmies, who average about four feet in stature. They are found in Africa in the Congo region, in the Ituri Forest, and in Oceania on the Andaman Islands, the Malay Peninsula, the Philippines, and Borneo.

The Mongoloids are basically the peoples of Asia, but are also in the Western Hemisphere as the American Indians, and are represented in Malaysia and in Oceania. The Mongoloids are usually divided into the following races: Sinic of China and Japan, Palearctic of Siberia, Turkic and Tungic or Mongolic of Central Asia, and Malayan of Malaysia. In the Western Hemisphere they are found as Eskimos and the Indians of the Americas. In Polynesia, i.e., in Samoa, Tonga, Hawaii and west to Easter Island, the Mongoloid stock is a basic element, with some Caucasoid and some Negroid (Melanesian?) admixture.

The Archaic Caucasoids are found in Australia as the Australian aborigines and in Japan as the Ainu. They may possibly be an element in Melanesia and in Ceylon and South India, e.g., the Toda, the Vedda, and other tribes.

This is a brief survey of the "stocks" and "races" of the world. There is much intermixing and some overlapping. This leads to two very important biological observations: (1) *there are no pure races*; (2) *there are no superior or inferior races*. We know from history that all peoples, upon contact, have crossed their genetically based physical traits. We know from human anatomy that in fundamental structure all peoples are identical.

As far as biological Man is concerned, what he is, is related to his cultural environment, rather than to any innate (or inherited) ability or aptitude. There is no "German race," only a German nationality; there is no "Jewish race," only a Jewish socio-religious community; there is no "Aryan race," only an Aryan language; there is no "master race," only a political bombast!

## Communicable Diseases

Source: *Control of Communicable Diseases in Man*, an official report of the American Public Health Assn.

Disease	Incubation period*	Period of communicability
Chickenpox (varicella).....	2 to 3 weeks	From 1 day before appearance of vesicles to 6 days after.
Common cold.....	12 to 72 hours	From 1 day before onset to 5 days after.
Conjunctivitis.....	1 to 3 days	During course of active infection.
Diphtheria.....	2 to 5 days	Usually 2 weeks or less; seldom more than 4 weeks.
Dysentery, amebic.....	3 to 4 weeks (varies widely)	During infection; possibly for years if untreated.
Food poisoning: Botulism.....	Within 18 hours	Not applicable.
Salmonella infection.....	6 to 48 hours in epidemics	3 days to 3 weeks (extremely variable).
Staphylococcus intoxication ..	½ to 4 hours	Not applicable.
German measles (rubella).....	14 to 21 days; usually 18	At least 4 days after onset of catarrhal symptoms.
Gonorrhea.....	3 to 9 days; sometimes 14	Indefinitely unless treated.
Impetigo contagiosa.....	Within 5 days; often 2	Until lesions are healed.
Influenza.....	1 to 3 days	1 week after onset.
Measles (rubeola).....	10 days (to onset) 14 days (to rash)	From 4 days before rash appears to 5 days after.
Meningitis, meningococcal.....	2 to 10 days	1 day after appropriate medication.
Mumps.....	12 to 26 days; commonly 18	From 2 days before onset to 9 days after, or until swelling subsides.
Pneumonia: Bacterial.....	Believed to be 1 to 3 days	Unknown.
Virus.....	Believed to be 7 to 21 days; commonly 12	Unknown.
Polio myelitis.....	7 to 21 days; commonly 12	From late incubation to first few days after onset; persists in feces for 3 to 6 weeks or more.
Rabies (Hydrophobia).....	2 to 6 weeks	Rarely communicated from man to man.
Rheumatic fever.....	Not applicable†	Not known to be communicable.
Scarlet fever and streptococcal sore throat.....	2 to 5 days	During incubation and clinical illness, about 10 days. May last for months in untreated patients.
Smallpox.....	7 to 16 days; commonly 12	From first symptoms to disappearance of scabs and crusts, a period of 2 to 3 weeks.
Syphilis.....	10 days to 10 weeks; usually 3 weeks	Variable and not definitely known.
Tetanus.....	4 days to 3 weeks	Not communicable from man to man.
Trichinosis.....	2 to 28 days after eating infected meat; usually 9 days	Not directly transmitted from man to man.
Tuberculosis.....	4 to 6 weeks (to primary phase)	As long as tubercle bacilli are discharged by patient.
Typhoid fever.....	1 to 3 weeks	As long as typhoid bacilli appear in excreta; 2 to 5% of patients become permanent carriers.
Whooping cough (pertussis).....	7 to 21 days	From 7 days after exposure to 3 weeks after onset of typical paroxysms.

Usual limits. † Usually precipitated by a previous infection.

## Gestation, Incubation and Longevity of Certain Animals

Source: T. Donald Carter, American Museum of Natural History.

Animal	Gestation and incubation, in days & (average)	Longevity, in years & (record exceptions)	Animal	Gestation and incubation, in days & (average)	Longevity, in years & (record exceptions)
Ass.....	340-385	18-20 (46)	Kangaroo.....	c. 39	10-12 (16)
Bear.....	180-240*	15-20 (34)	Lion.....	105-111	10 (29)
Cat.....	52-65	10-12 (21)	Mare.....	304-419 (336)	20-25 (50+)
Chicken.....	21	7-8 (14)	Monkey.....	149-179* (164)	12-15* (29)
Cow.....	c. 280	9-12 (25)	Mouse.....	19-31*	1-3 (4)
Deer.....	140-246*	10-15 (26)	Parakeet (Budgerigar).....	17-20 (18)	8 (12+)
Dog.....	55-70 (63)	10-12 (24)	Pigeon.....	18	10-12 (39)
Duck.....	21-35* (28)	10 (15)	Rabbit.....	27-36 (31)	6-8 (15)
Elephant.....	515-760* (628)	30-40 (98)	Rat.....	21-30 (22)	3 (5)
Ewe.....	146-161 (151)	12 (16)	Sow.....	101-130 (115)	10 (22)
Goat.....	135-163 (150)	12 (17)	Squirrel.....	28-35	8-9 (15)
Groundhog.....	28-42	4-7	Vixen (fox).....	51-60	8-10 (14)
Guinea pig.....	63-71	3 (6)	Whale.....	276-365*	.....
Hamster, golden.....	15-19	2	Wolf.....	63	10-12 (16)
Hippopotamus.....	220-255	30 (49+)	Woman.....	270+ or -	72†

\* Depending on kind. † Latest life expectancy charts list this age.

# RELIGION



## Principal Religions of the World

Source: *Encyclopaedia Britannica*.

Statistics of the world's religions are only very rough approximations. Aside from Christianity, few religions, any, attempt to keep statistical records; and even Protestants and Catholics employ different methods of counting members. All persons of whatever age who have received baptism in the Catholic Church are counted as members, while in most Protestant Churches only those who "join" the church are numbered. The compiling of statistics is further complicated by the fact that in China one may be at the same time a Confucian, a Taoist and a Buddhist. In Japan, one may be both a Buddhist and a Shintoist.

Religion	North America	South America	Europe	Asia <sup>1</sup>	Africa	Oceania <sup>2</sup>	Total
Christian—Total.....	128,467,527	91,677,138	441,383,109	25,374,305	28,911,430	26,171,973	741,985,482
Roman Catholic.....	74,561,995	89,412,040	215,363,295	8,857,842	14,194,448	18,951,281	421,340,901
Eastern Orthodox.....	1,208,157	.....	112,447,669	8,106,071	5,868,089	.....	127,629,986
Protestant.....	52,697,375	2,265,098	113,572,145	8,410,392	8,848,893	7,220,692	193,014,595
Jewish <sup>3</sup> .....	5,185,000	597,850	3,505,800 <sup>4</sup>	1,247,200	723,500	44,000	11,303,350
Mohammedan.....	32,600	139,156	3,866,000	251,227,347	60,359,000	75,000	315,699,103
Dravidian.....	.....	.....	.....	124,890	.....	.....	124,890
Shinto.....	.....	.....	.....	25,000,000	.....	.....	25,000,000
Taoist.....	15,000	17,000	12,000	50,000,000	1,200	8,000	50,053,200
Confucian.....	85,000	95,000	50,000	300,000,000	7,500	52,000	300,289,500
Buddhist.....	165,000	135,000	.....	150,000,000	.....	.....	150,300,000
Hindu.....	10,000	275,000	.....	255,030,506	300,000	100,000	255,715,506
Primitive.....	50,000	1,000,000	.....	45,000,000	75,000,000	100,000	121,150,000
Others or none.....	76,540,873	9,803,856	82,491,091	160,559,752	12,639,370	5,363,027	347,397,969
Grand Total.....	210,551,000	103,740,000	531,308,000	1,263,564,000	177,942,000	31,914,000	2,319,019,000

<sup>1</sup> Includes Indonesia, but not Philippines. <sup>2</sup> Includes Philippines. <sup>3</sup> Includes all Jews, whether or not members of synagogue. <sup>4</sup> Includes Asiatic U.S.S.R. and Turkey.

## History of Leading Religious Groups in the United States

(50,000 members or over; figures are for continental U. S.)

Source: *Yearbook of American Churches*.

### Baptist

**American Baptist Association.**—A group of Independent Missionary Baptist Churches organized into an association in 1905. Members (1951): 286,691.

**American Baptist Convention.**—The early historical local independency of Baptist churches in America tended to impede the formation of any general organization until in 1814 a General Missionary Convention was formed to permit Baptists to express themselves in terms of missionary activities. In 1845, the state conventions in the South withdrew to organize the Southern Baptist Convention. In 1907, the Northern Baptist Convention was organized, a delegated body under whose direction the many agencies of the Baptists in the North and West now operate. In May, 1950, the name was changed to the American Baptist Convention. Members (1955): 1,513,697.

**Baptist General Conference of America.**—Formerly known as the Swedish Baptist General Conference of America. It has operated as a general conference since 1879. Members (1955): 54,000.

**Conservative Baptist Association.**—Organized in 1947, it is a body with no

authority over the local churches. Adherents consider the Bible infallible. Members (1955): 250,000.

**Free Will Baptists.**—A body of Arminian Baptists, organized in 1787 by Benjamin Randall in New Hampshire. Members (1955): 159,831.

**The General Association of Regular Baptist Churches.**—Founded in 1932 in Chicago by a group of churches which had withdrawn from the Northern Baptist Convention. Members (1955): 124,039.

**General Baptists.**—An Arminian group of Baptists, organized in 1607 and transplanted to the Colonies in 1714. It died down in the East but was revived in the Midwest in 1823 under Rev. Benoni Stinson. Members (1955): 53,893.

**National Baptist Convention, U. S. A., Inc.**—The older and parent convention of Negro Baptists. This body is to be distinguished from the National Baptist Convention of America, usually referred to as the "unincorporated" body. Members (1954): 4,557,416.

**National Baptist Convention of America.**—This is a body usually referred to as the "unincorporated" convention, not to be confused with the "incorporated" National



**Baptist Convention, U. S. A., Inc.,** from which this body withdrew. Organized in 1895. Members (1955): 2,610,774.

**National Baptist Evangelical Life and Soul Saving Assembly of U. S. A.**—Organized in 1921 by A. A. Banks, Sr., as a charitable, educational, and evangelical organization. Members (1951): 57,674.

**National Primitive Baptist Convention of the U. S. A.**—A group of Negro Baptists opposed to all forms of church organization. Members (1952): 80,000.

**North American Baptist Association.**—Organized 1950 in Little Rock, Ark., as the result of a division in the American Baptist Association. In theology these churches are militantly fundamentalist. Members (1955): 251,062.

**Primitive Baptists.**—A large group of Baptists, largely through the South, who are opposed to all centralization, to modern missionary societies, and to Sunday schools. They are sometimes called "anti-missionary" Baptists. Members (1950): 72,000.

**Southern Baptist Convention.**—In 1845, Southern Baptists withdrew from the General Missionary Convention over the question of slavery and other matters and formed the Southern Baptist Convention. Members (1955): 8,467,439.

**United Baptists.**—This group dates from meetings of Regular Baptists and Separate Baptists held in Richmond, Va., in 1787, and a meeting under the name United Baptists in Clark County, Ky., in 1801. Members (1954): 60,525.

**The United Free Will Baptist Church.**—A body which set up its organization in 1901. Though ecclesiastically distinct, they are in close relations with the Free Will Baptists. Members (1952): 100,000.

### Catholic and Orthodox

**Armenian Apostolic Orthodox Church of America.**—The American branch of the Ancient Church of Armenia. Established in the U. S. in 1889. Diocesan organization under the jurisdiction of the Holy See of Etchmiadzin, Armenia, U.S.S.R. Members (1955): 75,000.

**The American Carpatho-Russian Orthodox Greek Catholic Church.**—This church is a self-governing diocese in communion with the Ecumenical Patriarchate of Constantinople. On Sept. 19, 1938, the late Patriarch Benjamin I canonized the diocese in the name of the Orthodox Church of Christ. Members (1955): 100,000.

**Greek Archdiocese of North and South America.**—Greek-speaking Orthodox Christians have had parishes in the U. S. for the last seventy years. These were first under the jurisdiction of the Metropolitan of Athens and later under the Patriarchate of Constantinople. Political changes in Europe have been reflected in this country

and have brought difficulties in all branches of the Orthodox Church. In 1931, a general convention held in New York City under the presidency of Archbishop Athenagoras brought a large measure of unity and order. Members (1955): 1,000,000.

**North American Old Roman Catholic Church.**—This body is identical with the Roman Catholic Church in worship, faith, etc., but differs in discipline. It was received into union with the Eastern Orthodox Church by the Archbishop of Beirut in 1911 and by the Orthodox Patriarch of Alexandria in 1912. Members (1955): 44,565.

**Polish National Catholic Church of America.**—After long dissatisfaction with Roman Catholic Administration in many Polish parishes, this group was organized in 1904. Members (1954): 265,879.

**The Roman Catholic Church.**—The largest single group of Christians in the U. S. The Roman Catholic Church is under the spiritual leadership of Pope Pius XII. This group dates back to the priests who accompanied Columbus on his second voyage to the New World. A settlement, later discontinued, was made at St. Augustine, Fla. The continuous history of this Church in the colonies began at St. Mary's in 1634, in Maryland. Members (1955): 33,396,647.

**Romanian Orthodox Episcopate of America.**—This body of Eastern Orthodox Christians of Rumanian descent is under the spiritual supervision and canonical jurisdiction of the Bishop of the Romanian Orthodox Church of North and South America. Members (1955): 50,000.

**The Russian Orthodox Church Outside Russia.**—Organized in 1920 to unite the missions and parishes of the Russian Orthodox Church outside of Russia. Members (1951): 55,000.

**The Russian Orthodox Greek Catholic Church of North America.**—The Russian Orthodox Catholic Church entered Alaska in 1792. In 1872, its headquarters were moved from Sitka to San Francisco and in 1905, to New York. It administers churches in the U. S., Canada, Alaska, Aleutian Is., South America and Japan. Members (1955): 750,000.

### U. S. Church Membership, 1955

*Source: Yearbook of American Churches.*

Religious group	Members
Buddhist.....	63,000
Old Catholic and Polish National Catholic.....	367,370
Eastern Orthodox.....	2,386,945
Judaism.....	5,500,000
Roman Catholic.....	33,396,647
Protestant.....	58,448,567
Total.....	100,162,567

NOTE: Compiled from figures furnished by 258 of the 268 religious bodies in the U. S.

**Serbian Eastern Orthodox Church.**—This body of the Eastern Orthodox Church has its own diocese and is under jurisdiction of the Serbian Patriarchate (Yugoslavia). Members (1955): 100,000.

**Syrian Antiochian Orthodox Church.**—This body is a division of the Orthodox Church which is under the jurisdiction of the Patriarch of Antioch. It is a member of the Federation of Orthodox Greek Catholic Churches in America. Members (1955): 100,000.

**Ukrainian Orthodox Church of U.S.A.**—This church was organized in the U. S. in 1919. Members (1955): 71,940.

## Lutheran

**American Lutheran Church.**—This Church is a constituent body of the American Lutheran Conference. It is itself the result of the merger in 1930 of the Evangelical Lutheran Joint Synod of Ohio and Other States (org. 1918), the Evangelical Lutheran Synod of Iowa and Other States (org. 1854), and the Lutheran Synod of Buffalo (org. 1845). Members (1954): 836,485.

**Augustana Evangelical Lutheran Church.**—This group, whose constituency originally was of Swedish extraction, is a member of the American Lutheran Conference and is also a participating body in the National Lutheran Council. Organized in 1860. Members (1955): 529,602.

**Evangelical Lutheran Church.**—In 1917 the United Norwegian Church, the Norwegian Synod and the Hauge Synod united under the name, Norwegian Lutheran Church of America. In 1930 this group became a constituent part of the American Lutheran Conference. The new name, The Evangelical Lutheran Church, was adopted at its General Convention in 1946. Members (1954): 940,580.

**The Evangelical Lutheran Joint Synod of Wisconsin and Other States.**—This group, a constituent part of the Synodical Conference, was organized in Wisconsin in 1850. Members (1954): 328,969.

**Lutheran Church-Missouri Synod.**—This group, the largest constituent part of the Synodical Conference, was organized in 1847, holds to an unwavering confessionalism and is the leader in the conservative group among the Lutherans. Members (1955): 2,004,110.

**Lutheran Free Church.**—This body was organized in 1897 as the result of differences of opinion in the United Norwegian Church over control of the Augsburg Seminary. It became a constituent part of the American Lutheran Conference in 1930. Members (1955): 72,135.

**United Evangelical Lutheran Church.**—This synod was organized in 1896 in Minneapolis by a merger of the two former

Danish Lutheran Synods in America—the Danish Ev. Luth. Church Conference (1884) and the Danish Ev. Luth. Church in North America (1893). Members (1955): 54,098.

**United Lutheran Church in America.**—This group dates back to the Ministerium of Pennsylvania, organized in 1748, and beyond that to early colonial days. It represents the union of the General Synod, General Council, and United Synod of the South in 1918. Members (1955): 2,175,726.

## Methodist

**African Methodist Episcopal Church.**—This group was formed in Philadelphia in 1816 and extended throughout the South after the Civil War. Members (1951): 1,166,301.

**African Methodist Episcopal Zion Church.**—This group was organized in 1796, coming out of the John Street Methodist Church, New York. Members (1955): 760,000.

**Christian Methodist Episcopal Church.**—In 1870, the General Conference of the M.E. Church, South, approved the request of its colored membership for the formation of their conferences into a separate body. Members (1951): 392,167.

**Free Methodist Church of North America.**—This body, organized in 1860, grew out of a movement in the Genesee Conference of the Methodist Episcopal Church towards a more original Methodism. Members (1954): 50,660.

**The Methodist Church.**—In April, 1939, the Uniting Conference forming The Methodist Church was held by representatives of the Methodist Episcopal Church, the Methodist Episcopal Church, South, and the Methodist Protestant Church. The Methodist Church in the United States originated with the efforts of John and Charles Wesley, leaders of the revival movement in England in the eighteenth century. Methodist emigrants from Ireland planted Methodism in America about 1760. In 1771 Francis Asbury, one of Wesley's preachers, later a Bishop, landed in Philadelphia. The Methodist Episcopal Church was organized in 1784-85. The Methodist Episcopal Church, South, dated from 1846, the separation from the Methodist Episcopal Church having taken place over the slavery issue. The Methodist Protestant Church dated from 1830, and was organized over the issue of lay representation. Members (1955): 9,292,046.

## Presbyterian

**Cumberland Presbyterian Church.**—In 1806, a presbytery (Cumberland) of the Presbyterian Church was dissolved by the Synod of Kentucky on account of its attitude toward revivals. Members of the presbytery organized as an independent

body in 1810 and became the Cumberland Presbyterian Church. When this body attempted to reunite with the Presbyterian Church in 1906, a minority preferred to continue as an independent church. Members (1955): 84,900.

**Presbyterian Church in the U. S.**—This group is the branch of the Presbyterian Church which separated from the main body at the time of the Civil War. It is often called the "Southern" Presbyterian Church. Members (1955): 810,917.

**Presbyterian Church in the United States of America.**—This group appeared among the earliest colonists of America. Its first church was established about 1640. Members (1955): 2,645,745.

**United Presbyterian Church of North America.**—This group dates back to the Reformed Presbyterian (Covenanter) Church (1643) and the Associate Presbyterian (Seceder) Church (1733), both of Scotland. These two groups appeared in America in 1774 and 1753 respectively. They united and became the Associate Reformed Presbyterian Church in 1782. A minority, however, continued as the Associate Presbyterian Church. In 1858 the two groups united and became the United Presbyterian Church. Members (1955): 244,973.

### Others

**Apostolic Overcoming Holy Church of God.**—A Negro body incorporated in Alabama in 1919. Members (1951): 75,000.

**Assemblies of God.**—Independent, pentecostal, evangelical, missionary churches associated for co-operative effort in district and general councils. Organized in Arkansas in 1914. Members (1955): 400,047.

**Buddhist Churches of America.**—Organized in 1914 as the Buddhist Mission of North America, this group was incorporated in 1942 under the present name and represents Buddhism in this country, the faith based on "the anatman doctrine, supplemented by the idea of karma, and nirvana, the holy ease or a blissful mental state of absolute freedom from evil." Members (1954): 63,000.

**Christ Unity Science Church, Inc.**—Established 1810. Members (1953): 1,581,286.

**The Christian and Missionary Alliance.**—An evangelical, evangelistic and missionary movement organized in 1887. It stresses "the deeper Christian life and consecration to the Lord's service." Members (1954): 57,109.

**Christian Reformed Church.**—A group of Dutch Calvinists which dissented from the Reformed Church in America in 1857 and which was strengthened by later accessions from the same source and by immigration. Members (1955): 204,621.

**Church of Christ, Scientist.**—Founded by Mary Baker Eddy in 1879. As defined by

Mrs. Eddy, Christian Science is the scientific system of divine healing and the reinstatement of primitive Christianity.\*

**The Church of God.**—Inaugurated by Bishop A. J. Tomlinson, who served as General Overseer 1903-43. Episcopal in administration. Members (1955): 70,941.

**Church of God (Anderson, Ind.).**—This group is one of the largest of the groups which have taken the name "Church of God." Its headquarters are at Anderson, Ind. It originated about 1880. Members (1955): 123,523.

**Church of God (Cleveland, Tenn.).**—This body, to be differentiated from the Church of God at Anderson, Ind., is a holiness group and pentecostal. It began in 1886 in Tennessee, under the name of Christian Union, reorganized in 1902 as the Holiness Church. In 1907 it adopted the name above. Members (1955): 142,668.

**Church of God in Christ.**—Organized in Arkansas in 1895, by C. P. Jones and C. H. Mason, who believed there was no salvation without holiness; incorporated 1897. Members (1954): 328,304.

**Church of the Brethren (Conservative Dunkers).**—German pietists from Crefeld, Germany, under the leadership of Peter Becker, entered the colonies in 1719, and settled at Germantown, Philadelphia, Pa. They were called Dunkers (baptizers) and were immersionists. The members are conservative as to attire, oaths or affirmations, resistance to force, temperance, and the like. Members (1955): 195,609.

**Church of the Nazarene.**—One of the larger holiness bodies, organized in Pilot Point, Tex., Oct. 1908. It is in general accord with the early doctrines of Methodism and emphasizes entire sanctification. Members (1955): 270,576.

**Churches of Christ.**—This body is made up of a large group of churches, formerly reported with the Disciples of Christ, but since the religious census of 1906, reported separately. They are strictly congregational and have no organization larger than the local congregation. Members (1955): 1,600,000.

**Congregational Christian Churches.**—Congregational churches date back to the Pilgrim Fathers and the early colonists of New England in 1620. The Christian churches date back to the Wesleyan and revival movements at the end of the eighteenth century. These two groups of churches were merged at Seattle, Wash., in 1931. Members (1955): 1,342,045.

**Disciples of Christ.**—In the revival period of the early nineteenth century, a movement under Thomas Campbell and his son, Alexander, resulted in the establishment of a fellowship called Christian

\*Membership figure not available. The manual of the church forbids "the numbering of people and the reporting of such statistics for publication."



or Disciples. They believe that sects are unscriptural. Members (1955): 1,897,736.

**Evangelical and Reformed Church.**—This body was formed on June 26, 1934, at Cleveland, Ohio, by a union of the Evangelical Synod of North America and the Reformed Church in the United States. The union was unique in that it left all details to be adjusted afterwards. The constitution was declared in effect at the General Synod which met at Lancaster, Pa., in June 1940. Members (1955): 774,227.

**Evangelical Mission Covenant Church of America.**—A transplantation to the U. S., in 1885, of a free-church movement in the Swedish state church. Until recently the name has been the Swedish Evangelical Mission Covenant. Members (1954): 53,388.

**The Evangelical United Brethren Church.**—This group had its origin in Johnstown, Pa., November 16, 1946, in the consummation of organic union between the Evangelical Church and the Church of the United Brethren in Christ. Both these former communions had their beginning in Pennsylvania in the evangelistic movement of the early 19th century. Jacob Albright was the founder of the Evangelical Church, and Dr. Philip William Otterbein was the founder of the United Brethren Church in 1800. Members (1955): 737,489.

**Federated Churches.**—Actually not a denomination but a group of local churches in various parts of the country. Members (1936): 88,411.

**Friends, The Five Years Meeting of.**—The Five Years Meeting of Friends was formed in 1902 by 13 Yearly Meetings entering into a loose confederation. Since then, two of the original Yearly Meetings have withdrawn (Kansas and Oregon) and three Yearly Meetings outside the U. S. have joined. Members (1955): 70,245.

**Independent Fundamental Churches of America.**—Organized in 1930, at Cicero, Ill., by representatives of various independent churches. Members (1946): 65,000.

**International Church of the Foursquare Gospel.**—An evangelistic missionary body organized by Aimee Semple McPherson in 1927. The parent church is Angelus Temple in Los Angeles. Members (1955): 94,571.

**Jehovah's Witnesses.**—A group calling themselves primitive Christians. They believe that the Kingdom under Christ will replace all earthly governments. Members (1955): 187,120.

**Jewish Congregations.**—Jews arrived in the colonies before 1650. The first congregation is recorded in 1656, in New York City, the Shearith Israel (Remnant of Israel). Members (1954): 5,500,000.

**Latter-day Saints, Church of Jesus Christ of.**—A group in which the Bible, the Book of Mormon, the Doctrine and Covenants and the Pearl of Great Price are re-

garded as the word of God. The primitive church organization is sought. Members (1955): 1,230,021.

**Latter-day Saints, Reorganized Church of Jesus Christ of.**—A division among the Latter-day Saints (Mormons) occurred on the death of Joseph Smith in 1844. His son, Joseph Smith, became presiding officer of this group, which has headquarters at Independence, Mo. Members (1955): 137,856.

**Mennonite Church.**—The largest group of the Mennonites who began arriving in the U. S. in 1683, settling in Germantown, Pa. They derive their name from Menno Simons, born 1496. Members (1955): 70,283.

**Moravian Church (Unitas Fratrum).**—In 1735, Moravian missionaries of the pre-Reformation faith of John Hus came to Georgia and, in 1740, to Pennsylvania. They established the Moravian Church. Members (1955): 55,524.

**Pentecostal Assemblies of the World, Inc.**—A pentecostal holiness group originating in the early part of the century and found largely in the Midwest. Members (1954): 60,000.

**Pentecostal Church of God of America, Inc.**—Organized in 1919 at Chicago, Ill. Members (1955): 60,000.

**The Protestant Episcopal Church.**—This group entered the colonies with the earliest settlers as the Church of England. It became autonomous, adopted its present name in 1789. Members (1954): 2,757,944.

**Reformed Church in America.**—This group was established by the earliest Dutch settlers of New York as the Reformed Protestant Dutch Church in 1628. Members (1955): 205,323.

**The Salvation Army.**—An evangelistic organization, with a military government, first set up by General William Booth in England and introduced into the U. S. in 1880. Members (1955): 249,641.

**Seventh-day Adventists.**—This body developed out of the Adventist movement (1833-1844), which emphasized the imminent personal return of Jesus Christ. It emphasized the observance of the seventh-day Sabbath and in 1863 was numerous enough to organize a conference. Members (1955): 277,162.

**Spiritualists, International General Assembly of.**—Organized in Buffalo, N. Y., in 1936. Members (1955): 163,000.

**Unitarian Churches.**—The Unitarian movement in Congregationalism, beginning in the eighteenth century, produced the American Unitarian Association in 1825. In 1865 a national conference was organized. Members (1955): 96,715.

**United Pentecostal Church, Inc.**—Pentecostal Church, Inc., and Pentecostal Assemblies of Jesus Christ merged in 1945 at St. Louis. Members (1955): 125,000.

## Bishops of the Protestant Episcopal Church

Source: Alexander M. Rodger, Secretary, The House of Bishops, 207 Fairmount Rd., Ridgewood, N. J.  
(Note: M—Missionary Bishop; C—Coadjutor; S—Suffragan)

**Presiding Bishop:** Henry K. Sherrill, New York City. **Vice President of National Council:** John B. Bentley, New York City.

- Alabama: Chas. C. J. Carpenter, George M. Murray (S), Birmingham.  
Alaska: Wm. J. Gordon, Jr. (M), Fairbanks.  
Albany (N. Y.): Frederick L. Barry, David E. Richards (S).  
Arizona: Arthur B. Kinsolving II (M), Phoenix.  
Arkansas: Robert R. Brown, Little Rock.  
Atlanta (Ga.): Randolph R. Claiborne.  
Bethlehem (Pa.): Frederick J. Warnecke.  
California: Karl M. Block, Henry H. Shires (S), San Francisco.  
Central Brazil: Louis C. Melcher (M), Rio de Janeiro.  
Central New York: Malcolm E. Peabody, Walter M. Higley (S), Syracuse.  
Chicago: Gerald F. Burrill, Charles L. Street (S).  
Colorado: Joseph S. Minnis, Denver.  
Connecticut: Walter H. Gray, Robert McC. Hatch (S), Hartford.  
Cuba: Alexander H. Blankingship (M), Havana.  
Dallas (Tex.): C. Avery Mason, John J. M. Harte (S).  
Delaware: J. Brooke Mosley, Wilmington.  
East Carolina: Thomas H. Wright, Wilmington, N. C.  
Eastern Oregon: Lane W. Barton (M), Bend.  
Easton (Md.): Allen J. Miller.  
Eau Claire (Wis.): William W. Horstick.  
Erie (Pa.): William Crittenden.  
European Churches: Stephen E. Keeler, Minneapolis, Minn.  
Florida: Hamilton West, Jacksonville.  
Fond du Lac (Wis.): William H. Brady.  
Georgia: Albert R. Stuart, Savannah.  
Haiti: C. A. Voegell (M), Port-au-Prince.  
Harrisburg (Pa.): J. Thomas Helstand, Harrisburg; Earl M. Honaman (S), Williamsport.  
Honolulu: Harry S. Kennedy (M).  
Idaho: (Vacant).  
Indianapolis: Richard A. Kirchhoffer.  
Iowa: Gordon V. Smith, Des Moines.  
Kansas: Goodrich F. Fenner, Edward C. Turner (C), Topeka.  
Kentucky: C. Gresham Marmion, Jr., Louisville.  
Lexington (Ky.): William R. Moody.  
Liberia: Bravid W. Harris (M), Monrovia.  
Long Island: James P. DeWolfe, Jonathan G. Sherman (S), Garden City, N. Y.  
Los Angeles: Francis E. I. Bloy, Donald J. Campbell (S).  
Louisiana: Girault M. Jones, New Orleans; Iveson B. Noland (S), Alexandria.  
Maine: Oliver L. Loring, Portland.  
Maryland: Noble C. Powell, Harry L. Doll (S), Baltimore.  
Massachusetts: Anson Phelps Stokes, Jr., Boston, Frederic C. Lawrence (S).  
Mexico: Efrain Salinas y Velasco (M), Mexico City.  
Michigan: Richard S. M. Emrich, Archie H. Crowley (S), Detroit.  
Milwaukee: Donald H. V. Hallock.  
Minnesota: Stephen E. Keeler, Hamilton H. Kellogg (C), Minneapolis.  
Mississippi: Duncan M. Gray, Jackson.  
Missouri: Arthur C. Lichtenberger, St. Louis.  
Montana: Henry H. Daniels, Helena.  
Nebraska: Howard R. Brinker, Omaha.  
Nevada: William F. Lewis (M), Reno.  
New Hampshire: Charles F. Hall, Concord.  
New Jersey: Alfred L. Banyard, Trenton.  
New Mexico and Southwest Texas: Charles J. Kinsolving III, Albuquerque, N. Mex.  
New York: Horace W. B. Donegan, Charles F. Boynton (S), New York City.  
Newark (N. J.): Benjamin M. Washburn, Leland W. F. Stark (C).  
North Carolina: Edwin A. Penick, Raleigh; Richard H. Baker (C), Greensboro.  
North Dakota: Richard Emery, Fargo.  
North Texas: George H. Quarterman (M), Amarillo.  
Northern Indiana: Reginald Mallett, South Bend.  
Northern Michigan: Herman R. Page, Menominee.  
Ohio: Nelson M. Burroughs, Cleveland.  
Oklahoma: Chilton Powell, Oklahoma City.  
Olympia (Wash.): Stephen F. Bayne, Jr., Seattle.  
Oregon: Benjamin D. Dagwell, James W. F. Carman (C), Portland.  
Panama Canal Zone: Reginald H. Gooden (M), Ancon.  
Pennsylvania: Oliver J. Hart, Joseph G. Armstrong (S), Philadelphia.  
Philippines: Norman S. Binsted (M), Lyman C. Ogilby (S), Manila.  
Pittsburgh: Austin Pardue, William S. Thomas (S).  
Puerto Rico: Albert E. Swift, Santurce.  
Quincy (Ill.): William L. Essex, Peoria.  
Rhode Island: John S. Higgins, Providence, R. I.  
Rochester (N. Y.): Dudley S. Stark.  
Sacramento (Calif.): A. W. Noel Porter.  
Salina (Kans.): Arnold M. Lewis (M).  
San Joaquin (Calif.): Sumner F. D. Walters (M), Stockton.  
South Carolina: Thomas N. Carruthers, Charleston.

South Dakota: Conrad H. Gesner (M),  
Sioux Falls.  
South Florida: Henry I. Louttit, Winter  
Park, William F. Moses (S).  
Southern Brazil: Egmont M. Krischke (M),  
Porto Alegre.  
Southern Ohio: Henry W. Hobson, Cin-  
cinnati.  
Southern Virginia: George P. Gunn, Nor-  
folk.  
Southwestern Brazil: Plinio L. Simões (M),  
Santa Maria.  
Southwestern Virginia: William H. Mar-  
mion, Roanoke.  
Spokane (Wash.): Russell S. Hubbard (M).  
Springfield (Ill.): Charles A. Clough.  
Tennessee: Theodore N. Barth, John Van-  
der Horst (S), Memphis.  
Texas: John E. Hines, James P. Clements  
(S), Austin.  
Upper Carolina: Clarence A. Cole, Colum-  
bia, S. C.

Utah: (Vacant.)  
Vermont: Vedder Van Dyck, Burlington.  
Virginia: Frederick D. Goodwin, Robert F.  
Gibson (C), Richmond.  
Washington (D. C.): Angus Dun.  
West Missouri: Edward R. Welles, Grand-  
view.  
West Texas: Everett H. Jones, R. Earl  
Dicus (S), San Antonio.  
West Virginia: Wilburn C. Campbell,  
Charleston.  
Western Carolina: M. George Henry, Ashe-  
ville, N. C.  
Western Massachusetts: William A. Law-  
rence, Springfield.  
Western Michigan: Dudley B. McNeil,  
Grand Rapids.  
Western New York: Lauriston L. Scaife,  
Buffalo.  
Wyoming: James W. Hunter, Laramie.

## Bishops of The Methodist Church

Source: Methodist Information, New York City.

Raymond L. Archer; Singapore, Malaya.  
G. Hodge Bachman; Birmingham, Ala.  
Sante Uberto Barbieri; Buenos Aires.  
Newell S. Booth; Elisabethville, Bel. Congo.  
J. W. E. Bowen; Atlanta, Ga.  
John W. Branscomb; Jacksonville, Fla.  
Charles W. Brashares; Chicago, Ill.  
Matthew W. Clair, Jr.; St. Louis, Mo.  
D. Stanley Coors; St. Paul, Minn.  
Fred P. Corson; Philadelphia, Pa.  
Dana Dawson; Topeka, Kans.  
F. Gerald Ensley; Des Moines, Iowa.  
Eugene M. Frank; St. Louis, Mo.  
Marvin A. Franklin; Jackson, Miss.  
Paul N. Garber; Richmond, Va.  
A. Raymond Grant; Portland, Oreg.  
Odd Hagen; Stockholm, Sweden.  
Nolan B. Harmon; Charlotte, N. C.  
Ivan Lee Holt; St. Louis, Mo.  
Gerald Kennedy; Los Angeles, Calif.  
Willis J. King; New Orleans, La.  
W. Earl Ledden; Syracuse, N. Y.  
John Wesley Lord; Boston, Mass.  
Edgar A. Love; Baltimore, Md.  
Paul E. Martin; Little Rock, Ark.  
William C. Martin; Dallas, Tex.

Shot K. Mondol; Hyderabad, India.  
Arthur J. Moore; Atlanta, Ga.  
Frederick B. Newell; New York, N. Y.  
H. Clifford Northcott; Madison, Wis.  
G. Bromley Oxnam; Washington, D. C.  
Glenn R. Phillips; Denver, Colo.  
J. Waskom Pickett; Delhi, India.  
Albert T. Prince; Monrovia, Liberia.  
Richard C. Raines; Indianapolis, Ind.  
Marshall R. Reed; Detroit, Mich.  
Clement D. Rockey; Lucknow, India.  
Julio Manuel Sabanes; Santiago, Chile.  
Roy H. Short; Nashville, Tenn.  
Ferdinand Sigg, Zürich, Switzerland.  
A. Frank Smith; Houston, Tex.  
W. Angie Smith; Oklahoma City, Okla.  
John A. Subhan; Bombay, India.  
Donald H. Tippet; San Francisco, Calif.  
José Valencia; Manila, Philippines.  
Edwin E. Voigt; Aberdeen, S. Dak.  
Ralph A. Ward; Hong Kong.  
William T. Watkins; Louisville, Ky.  
H. Bascom Watts; Lincoln, Nebr.  
Hazen G. Werner; Columbus, Ohio.  
Lloyd C. Wicke; Pittsburgh, Pa.  
Friedrich Wunderlich; Frankfurt, Germany.

## Roman Catholic Hierarchy of the U. S.

Source: National Catholic Welfare Conference, Washington, D. C.

(Note: A—Auxiliary; C—Coadjutor. Archbishops are shown in boldface type, Bishops in lightface. An Archbishop heading a diocese is called an "Archbishop ad Personam"; i.e., he bears the personal title of Archbishop. The Apostolic Delegate to the U. S. is Archbishop Amleto Giovanni Cicognani.)

### Archdioceses

Baltimore, Md.: Francis P. Keough; Jerome  
D. Sebastian (A).  
Boston, Mass.: Richard J. Cushing; Eric F.  
MacKenzie (A); Jeremiah E. Minihan  
(A).  
Chicago, Ill.: Samuel Cardinal Stritch;  
Bernard J. Sheil (A); Wm. D. O'Brien  
(A); Raymond P. Hillinger (A).  
Cincinnati, Ohio: Karl J. Alter; Clarence  
G. Issenmann (A).

Denver, Colo.: Urban J. Vehr.  
Detroit, Mich.: Edward Cardinal Mooney;  
A. M. Zaleski (A); H. E. Donnelly (A);  
J. A. Donovan (A).  
Dubuque, Iowa: Leo Binz; Henry P. Rohl-  
man (C); Loras T. Lane (A).  
Hartford, Conn.: Henry J. O'Brien; John F.  
Hackett (A).  
Indianapolis, Ind.: Paul C. Schulte.  
Kansas City, Kans.: Edward J. Hunkeler.



Los Angeles, Calif.: James Francis Cardinal McIntyre; Timothy Manning (A); Alden J. Bell (A).  
 Louisville, Ky.: John A. Floersch; Charles G. Maloney (A).  
 Milwaukee, Wis.: Albert G. Meyer; Roman R. Atkielski (A).  
 Newark, N. J.: Thomas A. Boland; Justin J. McCarthy (A).  
 New Orleans, La.: Joseph F. Rummel; L. Abel Caillouet (A).  
 New York, N. Y.: Francis Cardinal Spellman; Stephen J. Donahue (A); Joseph P. Donahue (A); Joseph F. Flannelly (A); Fulton J. Sheen (A); Edward V. Dargin (A); Joseph M. Pernicone (A); Raymond A. Lane; Paul Yu Pin.  
 Omaha, Nebr.: Gerald T. Bergan.  
 Philadelphia, Pa.: John F. O'Hara, C.S.C.; Joseph C. McCormick (A); Joseph McShea (A).  
 Portland, Oreg.: Edward D. Howard.  
 St. Louis, Mo.: Joseph E. Ritter; Leo C. Byrne (A).  
 St. Paul, Minn.: John G. Murray; William O. Brady (A).  
 San Antonio, Tex.: Robert E. Lucey; Stephen A. Leven (A).  
 San Francisco, Calif.: John J. Mitty; Hugh A. Donohoe (A); Merlin J. Guilfoyle (A).  
 Santa Fe, N. Mex.: Edwin V. Byrne.  
 Seattle, Wash.: Thomas A. Connolly; Thomas E. Gill (A).  
 Washington, D. C.: Patrick A. O'Boyle; John M. McNamara (A); Philip M. Hannan (A). Brian J. McEntegart; Michael J. Keyes, S.M.; Absene Turquetil, O.F.M.

### Dioceses

Alaska (vicariate): Francis D. Gleeson, S.J., Vicar Apostolic.  
 Albany, N. Y.: William A. Scully.  
 Alexandria, La.: Charles P. Greco.  
 Altoona, Pa.: Richard T. Guilfoyle.  
 Amarillo, Tex.: Lawrence J. FitzSimon.  
 Atlanta, Ga.: Francis E. Hyland.  
 Austin, Tex.: Louis J. Reicher.  
 Bahamas (Vicariate): Paul L. Hagerty, O.S.B., Vicar Apostolic.  
 Baker City, Oreg.: Francis P. Leipzig.  
 Belleville, Ill.: Albert R. Zuroweste.  
 Bismarck, N. Dak.: Lambert A. Hoch.  
 Boise, Idaho: James J. Byrne.  
 Bridgeport, Conn.: Lawrence J. Shehan.  
 Brooklyn, N. Y.: Thomas E. Molloy; Raymond Kearney (A); J. J. Bordman (A); Edmund J. Reilly (A).  
 Buffalo, N. Y.: Joseph A. Burke; Leo R. Smith (A).  
 Burlington, Vt.: E. F. Ryan; R. F. Joyce (A).  
 Camden, N. J.: Bartholomew J. Eustace.  
 Caroline-Marshall Islands (vicariate): (Vacant).  
 Charleston, S. C.: John J. Russell.  
 Cheyenne, Wyo.: Hubert M. Newell.

Cleveland, Ohio: Edward F. Hoban; Floyd L. Begin (A); John J. Krol (A).  
 Columbus, Ohio: Michael J. Ready; Edward G. Hettinger (A).  
 Corpus Christi, Tex.: Mariano S. Garriga; Adolph Marx (A).  
 Covington, Ky.: William T. Mulloy.  
 Crookston, Minn.: Francis J. Schenk.  
 Dallas-Ft. Worth, Tex.: Thomas K. Gorman; Augustine Danglmayr (A).  
 Davenport, Iowa: Ralph L. Hayes.  
 Des Moines, Iowa: Edward C. Daly, O.P.  
 Dodge City, Kans.: John B. Franz.  
 Duluth, Minn.: Thomas A. Welch; Laurence A. Glenn (A).  
 El Paso, Tex.: Sidney M. Metzger.  
 Erie, Pa.: John M. Gannon; Edward P. McManaman (A).  
 Evansville, Ind.: Henry J. Grimmelsman.  
 Fall River, Mass.: James L. Connolly.  
 Fargo, N. Dak.: Aloysius J. Muench; Leo F. Dworschak (A).  
 Fort Wayne, Ind.: (Vacant); Leo A. Pursley (A).  
 Gallup, N. Mex.: Bernard T. Espelage, O.F.M.  
 Galveston, Tex.: Wendelin J. Nold.  
 Grand Island, Nebr.: John L. Paschang.  
 Grand Rapids, Mich.: Allen J. Babcock.  
 Great Falls, Mont.: William J. Condon.  
 Green Bay, Wis.: Stanislaus V. Bona; John B. Grellinger (A).  
 Greensburg, Pa.: Hugh L. Lamb.  
 Guam (vicariate): Apollinaris W. Baumgartner, O.F.M. Cap., Vicar Apostolic.  
 Harrisburg, Pa.: George L. Leech; Lawrence F. Schott (A).  
 Helena, Mont.: Joseph M. Gilmore.  
 Honolulu: J. J. Sweeney; J. J. Scanlan (A).  
 Jamaica (Vicariate): John J. McEleney, S.J., Vicar Apostolic.  
 Jefferson City, Mo.: Joseph H. Marling, C.P.P.S.  
 Joliet, Ill.: Martin D. McNamara.  
 Juneau, Alaska: Dermot O'Flanagan.  
 Kansas City-St. Joseph, Mo.: John P. Cody.  
 La Crosse, Wis.: John P. Treacy.  
 Lafayette, Ind.: John G. Bennett; John J. Carberry (C).  
 Lafayette, La.: Maurice Schexnayder.  
 Lansing, Mich.: Joseph H. Albers.  
 Lincoln, Nebr.: Louis B. Kucera.  
 Little Rock, Ark.: Albert L. Fletcher.  
 Madison, Wis.: William P. O'Connor.  
 Manchester, N. H.: Matthew F. Brady.  
 Marquette, Mich.: Thomas L. Noa.  
 Mobile-Birmingham, Ala.: T. J. Toolen; Joseph A. Durick (A).  
 Monterey-Fresno, Calif.: Aloysius J. Willinger, C.Ss.R.  
 Nashville, Tenn.: William L. Adrian.  
 Natchez, Miss.: Richard O. Gerow.  
 Norwich, Conn.: Bernard J. Flanagan.  
 Ogdensburg, N. Y.: Walter P. Kellenberg.  
 Oklahoma City-Tulsa, Okla.: Eugene J. McGuinness.  
 Owensboro, Ky.: Francis R. Cotton.  
 Paterson, N. J.: James A. McNulty.

Peoria, Ill.: William E. Cousins.  
 Pittsburgh, Pa.: John F. Dearden; Coleman F. Carroll (A).  
 Ponce, P. R.: James E. McManus, C.S.S.R.  
 Portland, Maine: Joseph E. McCarthy; Daniel J. Feeney (C).  
 Providence, R. I.: Russell J. McVinney.  
 Pueblo, Colo.: Joseph C. Willging.  
 Raleigh, N. C.: Vincent S. Waters; James J. Navagh (A).  
 Rapid City, S. Dak.: William T. McCarty, C.Ss.R.  
 Reno, Nev.: Robert J. Dwyer.  
 Richmond, Va.: Peter L. Ireton; Joseph H. Hodges (A).  
 Rochester, N. Y.: James E. Kearney; Lawrence B. Casey (A).  
 Rockford, Ill.: Donald M. Carroll.  
 Sacramento, Calif.: Robert J. Armstrong; Joseph T. McGucken (C).  
 Saginaw, Mich.: Stephen S. Woznicki.  
 St. Augustine, Fla.: Joseph P. Hurley; Thomas J. McDonough (A).  
 St. Cloud, Minn.: Peter W. Bartholome.  
 Salina, Kans.: Frank A. Thill.  
 Salt Lake City, Utah: Duane G. Hunt; J. Lennox Federal (A).  
 San Diego, Calif.: Charles F. Buddy; Richard H. Ackerman (A).  
 San Juan, P. R.: James P. Davis.  
 Savannah, Ga.: Gerald P. O'Hara.  
 Scranton, Pa.: Jerome D. Hannan; Henry T. Klonowski (A).  
 Sioux City, Iowa: Joseph M. Mueller.  
 Sioux Falls, S. Dak.: (Vacant).

Spokane, Wash.: Bernard Joseph Topel.  
 Springfield, Ill.: William A. O'Connor.  
 Springfield, Mass.: Christopher J. Weldon.  
 Springfield-Cape Girardeau, Mo.: Charles M. Helmsing.  
 Steubenville, Ohio: John K. Mussio.  
 Superior, Wis.: Joseph J. Annabring.  
 Syracuse, N. Y.: Walter A. Foery; David F. Cunningham (A).  
 Toledo, Ohio: George J. Rehring.  
 Trenton, N. J.: George W. Ahr.  
 Tucson, Ariz.: Daniel J. Gercke; Francis J. Green (A).  
 Wheeling, W. Va.: John J. Swint; Thomas J. McDonnell (C).  
 Wichita, Kans.: Mark K. Carroll.  
 Wilmington, Del.: Edmond J. Fitzmaurice; Hubert J. Cartwright (C).  
 Winona, Minn.: Edward A. Fitzgerald.  
 Worcester, Mass.: John J. Wright.  
 Yakima, Wash.: Joseph P. Dougherty.  
 Youngstown, Ohio: Emmet M. Walsh.  
 Military Ordinariate: Francis Cardinal Spellman, Military Vicar; William Arnold, Military Delegate; Philip J. Furlong (A).  
 Belmont, N. C. (Abbacy Nullius): Vincent G. Taylor, O.S.B. (Abbot).  
 Philadelphia, Pa. (Byzantine Rite): Constantine Bohachevsky; Joseph Schmon-diuk (A).  
 Pittsburgh, Pa. (Greek Rite): Nicholas T. Elko; Stephen Kocisko (A).  
 Stamford, Conn. (Ukrainian Greek Catholic Diocese): Ambrose Senyshyn.

## The College of Cardinals

### Cardinal Bishops

Year of creation	Name	Office or dignity	Nationality
1936	Eugene Tisserant	Bishop of Ostia, Porto, and Santa Rufina; Dean of the Sacred College of Cardinals; Secretary of the Sacred Congregation for the Oriental Church; Prefect of the Sacred Congregation of Ceremonies	French
1946	Clemente Micara	Bishop of Velletri; Vicar General of Rome	Italian
1937	Giuseppe Pizzardo	Bishop of Albano; Secretary of the Supreme Sacred Congregation of the Holy Office; Prefect of the Sacred Congregation of Seminaries and Universities	Italian
1946	Benedetto Aloisi Masella	Bishop of Palestrina; Prefect of the Sacred Congregation of the Sacraments; Archpriest of St. John Lateran's Basilica	Italian
1937	Adeodato Giovanni Piazza, O. C. D.	Bishop of Sabina; Secretary of the Sacred Consistorial Congregation	Italian
1933	Federico Tedeschini	Bishop of Frascati; Archpriest of St. Peter's Basilica; Prefect of the Sacred Congregation of the Basilica of St. Peter; Apostolic Datary	Italian

## Cardinal Priests

1925	Alessandro Verde	Archpriest of Liberian Patriarchal Basilica of St. Mary Major	Italian
1927	Joseph Ernest Van Roey	Archbishop of Malines	Belgian
1927	Pedro Segura y Saenz	Archbishop of Sevilla	Spanish
1929	Emanuel Goncalves Cerejeira	Patriarch of Lisbon	Portuguese
1930	Achilles Lienart	Bishop of Lille	French
1933	Pietro Fumasoni-Biondi	Prefect of the Sacred Congregation for the Propagation of the Faith	Italian
1933	Maurilio Fossati	Archbishop of Turin	Italian
1933	Elia dalla Costa	Archbishop of Florence	Italian
1935	Ignazio Tappouni	Syrian Patriarch of Antioch	Iraqian
1935	Santiago Copello	Archbishop of Buenos Aires	Argentine
1937	Pierre Marie Gerlier	Archbishop of Lyon	French
1946	Gregory Peter XV Agagianian	Patriarch of Cilicia of the Armenians	Trans-caucasian
1946	Edward Mooney	Archbishop of Detroit	American
1946	Jules Saliège	Archbishop of Toulouse	French
1946	James McGuigan	Archbishop of Toronto	Canadian
1946	Samuel A. Stritch	Archbishop of Chicago	American
1946	Emile Roques	Archbishop of Rennes	French
1946	Carlo Carmelo de Vasconcellos Mota	Archbishop of São Paulo	Brazilian
1946	Norman Gilroy	Archbishop of Sydney	Australian
1946	Francis J. Spellman	Archbishop of New York	American
1946	José María Caro Rodríguez	Archbishop of Santiago	Chilean
1946	Teodosio Clemente de Gouveia	Archbishop of Lourenço Marques, Mozambique	Portuguese
1946	Jaime de Barros Camara	Archbishop of Rio de Janeiro; Ordinary for Oriental Catholics in Brazil	Brazilian
1946	Enrique Pla y Deniel	Archbishop of Toledo and Primate of Spain	Spanish
1946	Manuel Arteaga y Betancourt	Archbishop of Havana	Cuban
1946	Joseph Frings	Archbishop of Cologne	German
1946	Jozsef Mindszenty	Archbishop of Esztergom and Primate of Hungary	Hungarian
1946	Ernesto Ruffini	Archbishop of Palermo; Apostolic Administrator of the Byzantium Rite Eparchy of Piani Del Greci	Italian
1946	Antonio Caggiano	Bishop of Rosario	Argentine
1946	Thomas Tien, S. V. D.	Archbishop of Peiping	Chinese
1953	Celso Costantini	Secretary of the Sacred Congregation for the Propagation of the Faith; Chancellor of the Holy Roman Church	Italian
1953	Augusto Alvaro da Silva	Archbishop of San Salvador in Bala	Brazilian
1953	Gaetano Cicognani	Prefect of Sacred Congregation of Rites; Pro-Prefect of the Apostolic Signature	Italian
1953	Angelo G. Roncalli	Patriarch of Venice	Italian
1953	Valerio Valeri	Prefect of Sacred Congregation of Affairs of Religious	Italian



1953	Pietro Ciriaci	Prefect of Sacred Congregation of the Council	Italian
1953	Maurice Feltin	Archbishop of Paris	French
1953	Marcello Mimmi	Archbishop of Naples	Italian
1953	Carlos Maria de la Torre	Archbishop of Quito	Ecuadorian
1953	Aloysius Stepinac	Archbishop of Zagreb	Yugoslavian
1953	Georges F. X. M. Grente	Archbishop <i>ad personam</i> of Le Mans	French
1953	Giuseppe Siri	Archbishop of Genoa	Italian
1953	John F. D'Alton	Archbishop of Armagh, Primate of all Ireland	Irish
1953	James Francis McIntyre	Archbishop of Los Angeles	American
1953	Giacomo Lercaro	Archbishop of Bologna	Italian
1953	Stefan Wyszyński	Archbishop of Gniezno and Warsaw	Polish
1953	Benjamin de Arriba y Castro	Archbishop of Tarragona	Spanish
1953	Fernando Quiroga y Palacios	Archbishop of Santiago di Compostela	Spanish
1953	Paul Émile Leger, S.S.	Archbishop of Montreal	Canadian
1953	Crisanto Luque	Archbishop of Bogotá, Primate of Colombia	Colombian
1953	Valerian Gracias	Archbishop of Bombay	Indian
1953	Josef Wendel	Archbishop of Munich and Freising	German

#### Cardinal Deacons

1935	Nicola Canali	Grand Penitentiary; President of the Commission charged with the Administration of Vatican City	Italian
1935	Giovanni Mercati	Librarian and Archivist of the Holy Roman Church; Protector of the Vatican Library	Italian
1953	Alfredo Ottaviani	Pro-Secretary of the Supreme Congregation of the Holy Office	Italian

### Antipopes

Antipopes were those who falsely claimed Papal Sovereignty. The dates and, in some cases, Roman numerals after the names account for occasional discrepancies in the succession of the Popes.

Name	Birthplace	Access.	End of reign	Name	Birthplace	Access.	End of reign
St. Hippolytus	Rome	217	235	Clement III	Parma	1080	1100
Novatian	Rome	251	...	Theodoric	.....	.....	1100
Felix II	Rome	355	365	Albert	.....	.....	1102
Ursinus	.....	366	367	Sylvester IV	Rome	1105	1111
Eulalius	.....	418	419	Gregory VIII	France	1118	1121
Lawrence	.....	498	501	Celestine II	Rome	.....	1124
Dioscorus	Alexandria	530	530	Anacletus II	Rome	1130	1138
Theodore	.....	...	687	Victor IV	.....	1138	1138
Paschal	.....	...	687	Victor IV*	Montecelio	1159	1164
Constantine	Nepi	767	769	Paschal III	.....	1164	1168
Philip	.....	768	768	Callistus III	Arezzo	1168	1178
John	.....	...	844	Innocent III	Sezze	1179	1180
Anastasius	.....	855	855	Nicholas V	Corvaro	1328	1330
Christopher	Rome	903	904	Clement VII	.....	1378	1394
Boniface VII	Rome	974	974	Benedict XIII	Aragon	1394	1423
Boniface VII	.....	984	985	Alexander V	Crete	1409	1410
(2nd time)				John XXIII	Naples	1410	1415
John XVI	Rossano	997	998	Felix V	.....	1439	1449
Gregory	.....	...	1012				
Benedict X	Rome	1058	1059				
Honorius II	Verona	1061	1072				

\* Did not recognize his predecessor of 1138, who, only two months after claiming the Papacy, submitted to the rightful Pope, Innocent II.

## Roman Catholic Pontiffs

*Source for Catholic information: The National Catholic Almanac.*

**St. Peter, of Bethsaida in Galilee, Prince of the Apostles, was the first Pope. He resided first in Antioch and then for twenty-five years in Rome, where he suffered martyrdom in 64 or 67 of the modern era. He was followed by St. Linus.**

Name	Birthplace	Access.	End of reign	Name	Birthplace	Access.	End of reign
St. Linus	Tuscia	67	76	Sabinianus	Tuscia	604	606
St. Anaclethus (Cletus)	Rome	76	88	Boniface III	Rome	607	607
St. Clement	Rome	88	97	St. Boniface IV	Marsi	608	611
St. Evaristus	Greece	97	105	St. Deusdedit (Aedeodatus I)	Rome	615	618
St. Alexander I	Rome	105	115	Boniface V	Naples	619	625
St. Sixtus I	Rome	115	125	Honorius I	Campania	625	638
St. Telesphorus	Greece	125	136	Severinus	Rome	640	640
St. Hyginus	Greece	136	140	John IV	Dalmatia	640	642
St. Pius I	Aquileia	140	155	Theodore I	Greece	642	649
St. Anicetus	Syria	155	166	St. Martin I	Todi	649	655
St. Soter	Campania	166	175	St. Eugenius I	Rome	654	657
St. Eleutherius	Epirus	175	189	St. Vitalian	Segni	657	672
St. Victor I	Africa	189	199	Aedeodatus II	Rome	672	676
St. Zephyrinus	Rome	199	217	Donus	Rome	676	678
St. Callistus I	Rome	217	222	St. Agatho	Sicily	678	681
St. Urban I	Rome	222	230	St. Leo II	Sicily	682	683
St. Pontian	Rome	230	235	St. Benedict II	Rome	684	685
St. Anterus	Greece	235	236	John V	Syria	685	686
St. Fabian	Rome	236	250	Conon	Unknown	686	687
St. Cornelius	Rome	251	253	St. Sergius I	Syria	687	701
St. Lucius I	Rome	253	254	John VI	Greece	701	705
St. Stephen I	Rome	254	257	John VII	Greece	705	707
St. Sixtus II	Greece	257	258	Sisinnius	Syria	708	708
St. Dionysius	Unknown	259	268	Constantine	Syria	708	715
St. Felix I	Rome	269	274	St. Gregory II	Rome	715	731
St. Eutychian	Luni	275	283	St. Gregory III	Syria	731	741
St. Calus	Dalmatia	283	296	St. Zachary	Greece	741	752
St. Marcellinus	Rome	296	304	Stephen II	Rome	752	752
St. Marcellus I	Rome	308	309	Stephen III	Rome	752	757
St. Eusebius	Greece	309	309	St. Paul I	Rome	757	767
St. Melchiades	Africa	311	314	Stephen IV	Sicily	768	772
St. Sylvester I	Rome	314	335	Adrian I	Rome	772	795
St. Marcus	Rome	336	336	St. Leo III	Rome	795	816
St. Julius I	Rome	337	352	Stephen V	Rome	816	817
St. Liberius	Rome	352	366	St. Paschal I	Rome	817	824
St. Damasus I	Spain	366	384	Eugenius II	Rome	824	827
St. Siricius	Rome	384	399	Valentine	Rome	827	827
St. Anastasius I	Rome	399	401	Gregory IV	Rome	827	844
St. Innocent I	Albano	401	417	Sergius II	Rome	844	847
St. Zozimus	Greece	417	418	St. Leo IV	Rome	847	855
St. Boniface I	Rome	418	422	Benedict III	Rome	855	858
St. Celestine I	Campania	422	432	St. Nicholas	Rome	858	867
St. Sixtus III	Rome	432	440	Adrian II	Rome	867	872
St. Leo I	Tuscia	440	461	John VIII	Rome	872	882
(the Great)				Marinus I	Gallese	882	884
St. Hilary	Sardo	461	468	St. Adrian III	Rome	884	885
St. Simplicius	Tivoli	468	483	Stephen VI	Rome	885	891
St. Felix III (II)	Rome	483	492	Formosus	Portus	891	896
St. Gelasius I	Africa	492	496	Boniface VI	Rome	896	896
Anastasius II	Rome	496	498	Stephen VII	Rome	896	897
St. Symmachus	Sardo	498	514	Romanus	Gallese	897	897
St. Hormisdas	Frosinone	514	523	Theodore II	Rome	897	897
St. John I	Tuscia	523	526	John IX	Tivoli	898	900
St. Felix IV (III)	Sannio	526	530	Benedict IV	Rome	900	903
Boniface II	Rome	530	532	Leo V	Ardea	903	903
John II	Rome	533	535	Sergius III	Rome	904	911
St. Agapitus I	Rome	535	536	Anastasius III	Rome	911	913
St. Silverius	Campania	536	537	Landis	Sabina	913	914
Vigilius	Rome	537	555	John X	Tossignano	914	928
Pelagius I	Rome	556	561	Leo VI	Rome	928	928
John III	Rome	561	574	Stephen VIII	Rome	928	931
Benedict I	Rome	575	579	John XI	Rome	931	935
Pelagius II	Rome	579	590	Leo VII	Rome	936	939
St. Gregory I	Rome	590	604	Stephen IX	Rome	939	942
(the Great)				Marinus II	Rome	942	946

Name	Birthplace	Access.	End of reign	Name	Birthplace	Access.	End of reign
Agapitus II	Rome	946	955	Bl. Benedict XI	Treviso	1303	1304
John XII	Tusculum	955	964	Clement V	France	1305	1314
Leo VIII	Rome	963	965	John XXII	Cahors	1316	1334
Benedict V	Rome	964	966	Benedict XII	France	1334	1342
John XIII	Rome	965	972	Clement VI	France	1342	1352
Benedict VI	Rome	973	974	Innocent VI	France	1352	1362
Benedict VII	Rome	974	983	Bl. Urban V	France	1362	1370
John XIV	Pavia	983	984	Gregory XI	France	1370	1378
John XV	Rome	985	996	Urban VI	Naples	1378	1389
Gregory V	Saxony	996	999	Boniface IX	Naples	1389	1404
Sylvester II	Alvernia	999	1003	Innocent VII	Sulmona	1404	1406
John XVII	Rome	1003	1003	Gregory XII	Venetia	1406	1415
John XVIII	Rome	1004	1009	Martin V	Rome	1417	1431
Sergius IV	Rome	1009	1012	Eugene IV	Venetia	1431	1447
Benedict VIII	Tusculum	1012	1024	Nicholas V	Sarzana	1447	1455
John XIX	Tusculum	1024	1032	Callistus III	Valencia	1455	1458
Benedict IX*	Tusculum	1032	1044	Pius II	Siena	1458	1464
Sylvester III	Rome	1045	1045	Paul II	Venetia	1464	1471
Benedict IX	....	1045	1045	Sixtus IV	Savona	1471	1484
(2nd time)				Innocent VIII	Genoa	1484	1492
Gregory VI	Rome	1045	1046	Alexander VI	Valencia	1492	1503
Clement II	Saxony	1046	1047	Pius III	Siena	1503	1503
Benedict IX	....	1047	1048	Julius II	Savona	1503	1513
(3rd time)				Leo X	Florence	1513	1521
Damasus II	Bavaria	1048	1048	Adrian VI	Utrecht	1522	1523
St. Leo IX	Egisheim-Dagsburg	1049	1054	Clement VII	Florence	1523	1534
Victor II	Dollnstein-Hirschberg	1055	1057	Paul III	Rome	1534	1549
Stephen X	Lorraine	1057	1058	Julius III	Rome	1550	1555
Nicholas II	Burgundy	1059	1061	Marcellus II	Montepulciano	1555	1555
Alexander II	Milan	1061	1073	Paul IV	Naples	1555	1559
St. Gregory VII	Tuscia	1073	1085	Pius IV	Milan	1559	1565
Bl. Victor III	Benevento	1086	1087	St. Pius V	Bosco	1566	1572
Bl. Urban II	France	1088	1099	Gregory XIII	Bologna	1572	1585
Paschal II	Ravenna	1099	1118	Sixtus V	Grottammare	1585	1590
Gelasius II	Gaeta	1118	1119	Urban VII	Rome	1590	1590
Callistus II	Burgundy	1119	1124	Gregory XIV	Cremona	1590	1591
Honorius II	Flagnano	1124	1130	Innocent IX	Bologna	1591	1591
Innocent II	Rome	1130	1143	Clement VIII	Florence	1592	1605
Celestine II	Città di Castello	1143	1144	Leo XI	Florence	1605	1605
Lucius II	Bologna	1144	1145	Paul V	Rome	1605	1621
Bl. Eugene III	Pisa	1145	1153	Gregory XV	Bologna	1621	1623
Anastasius IV	Rome	1153	1154	Urban VIII	Florence	1623	1644
Adrian IV	England	1154	1159	Innocent X	Rome	1644	1655
Alexander III	Siena	1159	1181	Alexander VII	Siena	1655	1667
Lucius III	Lucca	1181	1185	Clement IX	Pistola	1667	1669
Urban III	Milan	1185	1187	Clement X	Rome	1670	1676
Gregory VIII	Benevento	1187	1187	Innocent XI	Como	1676	1689
Clement III	Rome	1187	1191	Alexander VIII	Venetia	1689	1691
Celestine III	Rome	1191	1198	Innocent XII	Naples	1691	1700
Innocent III	Anagni	1198	1216	Clement XI	Urbino	1700	1721
Honorius III	Rome	1216	1227	Innocent XIII	Rome	1721	1724
Gregory IX	Anagni	1227	1241	Benedict XIII	Rome	1724	1730
Celestine IV	Milan	1241	1241	Clement XII	Florence	1730	1740
Innocent IV	Genoa	1243	1254	Benedict XIV	Bologna	1740	1758
Alexander IV	Anagni	1254	1261	Clement XIII	Venetia	1758	1769
Urban IV	Troyes	1261	1264	Clement XIV	Rimini	1769	1774
Clement IV	France	1265	1268	Pius VI	Cesena	1775	1799
Bl. Gregory X	Placenza	1271	1276	Pius VII	Cesena	1800	1823
Bl. Innocent V	Savoy	1276	1276	Leo XII	Fabriziano	1823	1829
Adrian V	Genoa	1276	1276	Pius VIII	Cingoli	1829	1830
John XXI	Portugal	1276	1277	Gregory XVI	Belluno	1831	1846
Nicholas III	Rome	1277	1280	Pius IX	Senigallia	1846	1878
Martin IV	France	1281	1285	Leo XIII	Carpineto	1878	1903
Honorius IV	Rome	1285	1287	St. Pius X	Riese	1903	1914
Nicholas IV	Ascoli	1288	1292	Benedict XV	Genoa	1914	1922
St. Celestine V	Isernia	1294	1294	Pius XI	Desio	1922	1939
Boniface VIII	Anagni	1294	1303	Pius XII	Rome	1939	

\* If the triple removal of Benedict IX was not valid, Sylvester III, Gregory VI and Clement II were antipopes.  
 NOTE: This list of Popes, adapted from the *Annuario Pontificio*, is in accordance with the recent revisions made by Monsignor Mercati, Prefect of the Vatican's archives. All Popes before Sylvester I are listed as martyrs; other martyrs were: St. John I, St. Silverius and St. Martin I. The accession year is that during which the Pope was elected.



## Archbishops of Canterbury

Sequence	Name	Created	Sequence	Name	Created
1	Augustine (consecrated Bishop 597)	601	50	Robert Winchelsey	1294
2	Laurentius	604	51	Walter Reynolds	1313
3	Mellitus	619	52	Simon Mepeham	1328
4	Justus	624	53	John Stratford	1333
5	Honorius	627	54	Thomas Bradwardine	1349
6	Deusdedit	655	55	Simon Islip	1349
7	Theodorus	668	56	Simon Langham	1366
8	Beorhtweald	693	57	William Whittlesey	1368
9	Tatwine	731	58	Simon Sudbury	1375
10	Nothelm	735	59	William Courtenay	1381
11	Cuthbeorht	740	60	Thomas Arundel	1396
12	Breguwine	761	61	Roger Walden	1398
13	Jaenbeorht	765	62	Thomas Arundel (restored)	1399
14	Æthelheard	793	63	Henry Chichele	1414
15	Wulfred	805	64	John Stafford	1443
16	Feologild	832	65	John Kemp	1452
17	Ceolnoth	833	66	Thomas Bourchier	1454
18	Æthelred	870	67	John Morton	1486
19	Plegmund	890	68	Henry Dean	1501
20	Æthelhelm	914	69	William Warham	1503
21	Wulfhelm	923	70	Thomas Cranmer	1533
22	Oda	942	71	Reginald Pole	1556
23	Ælfsige	959	72	Matthew Parker	1559
24	Beorhthelm	959	73	Edmund Grindal	1576
25	Dunstan	960	74	John Whitgift	1583
26	Æthelgar	988	75	Richard Bancroft	1604
27	Sigeric Serlo	990	76	George Abbot	1611
28	Ælfric	995	77	William Laud	1633
29	Ælfheah	1005	78	William Juxon	1660
30	Lyfing	1013	79	Gilbert Sheldon	1663
31	Æthelnoth	1020	80	William Sancroft	1678
32	Eadsige	1038	81	John Tillotson	1691
33	Robert (Champart) of Jumièges	1051	82	Thomas Tenison	1695
34	Stigand	1052	83	William Wake	1716
35	Lanfranc	1070	84	John Potter	1737
36	Anselm	1093	85	Thomas Herring	1747
37	Ralph d'Escures	1114	86	Matthew Hutton	1757
38	William de Corbell	1123	87	Thomas Secker	1758
39	Theobald	1139	88	Frederick Cornwallis	1768
40	Thomas Becket	1162	89	John Moore	1783
41	Richard (of Dover)	1174	90	Charles Manners-Sutton	1805
42	Baldwin	1185	91	William Howley	1828
43	Hubert Walter	1193	92	John Bird Sumner	1848
44	Stephen Langton	1207	93	Charles Thomas Longley	1862
45	Richard le Grant (of Wetharshed)	1229	94	Archibald Campbell Tait	1868
46	Edmund Rich	1234	95	Edward White Benson	1883
47	Boniface of Savoy	1245	96	Frederick Temple	1896
48	Robert Kilwardby	1273	97	Randall Thomas Davidson	1903
49	John Pecham (Peckham)	1279	98	Cosmo Gordon Lang	1928
			99	William Temple	1942
			100	Geoffrey Francis Fisher	1945

(NOTE: Anglicans consider the line of Archbishops unbroken from Augustine to the present day. Roman Catholics consider the office vacant since 1558, the death of Pole.)

## History of the Christian Church in England

- |   |   |
|---|---|
| <p>5th century Arrival in England of Angles, Saxons and Jutes. Church isolated from Rome.</p> <p>597 Augustine sent to convert Saxons.</p> <p>1534 Act of Supremacy makes king head of Church of England.</p> <p>1554 Church again united with Rome under reign of Mary.</p> <p>1558 Church restored to Crown at accession of Elizabeth.</p> <p>1611 King James version of Bible.</p> | <p>1646 Puritan rebellion. Presbyterianism becomes state religion.</p> <p>1660 Restoration. Power of Church of England restored under Charles II.</p> <p>1739 John Wesley founds Methodism.</p> <p>1829 Catholic emancipation.</p> <p>1833-45 Oxford Movement attempts to bring Church of England closer to ideals of ancient Church. This movement continues as important influence.</p> |
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## Jewish Congregational and Rabbinical Organizations

Central Conference of American Rabbis:  
40 W. 68th St., New York 23, N. Y.

Rabbinical Alliance of America: 141 So. 3rd  
St., Brooklyn 11, N. Y.

Rabbinical Assembly of America: 3080  
Broadway, New York 27, N. Y.

Rabbinical Council of America, Inc.: 331  
Madison Ave., New York 17, N. Y.

Synagogue Council of America: 110 W.  
42nd St., New York 36, N. Y.

Union of American Hebrew Congregations:  
838 Fifth Ave., New York 21, N. Y.

Union of Orthodox Rabbis of the U. S. and  
Canada: 132 Nassau St., New York 38, N. Y.

United Synagogue of America: 3080 Broad-  
way, New York 27, N. Y.

Union of Orthodox Jewish Congregations of America: 305 Bdwy., New York 7, N. Y.

## Religious and Secular Holidays, 1957

**NEW YEAR'S DAY**—Tuesday, Jan. 1—A legal holiday in all states and the District of Columbia, New Year's Day has its origin in Roman times, when sacrifices were offered to Janus, the two-faced Roman deity who looked back on the past and forward to the future.

**EPIPHANY**—Sunday, Jan. 6—Falls the twelfth day after Christmas and commemorates the manifestation of Jesus as the Son of God, as represented by the adoration of the Magi, the baptism of Jesus, and the miracle of the wine at the marriage feast at Cana. Epiphany originally marked the beginning of the carnival season preceding Lent, and the evening (sometimes the eve) is known as Twelfth Night.

**LINCOLN'S BIRTHDAY**—Tuesday, Feb. 12—A legal holiday in many states, this day was first formally observed in Washington, D. C., in 1866, when both houses of Congress gathered for a memorial address in honor of the late President.

**ST. VALENTINE'S DAY**—Thursday, Feb. 14—This day is the festival of two 3rd-century martyrs, both named St. Valentine. It is not known why this day is associated with lovers. It may derive from an old pagan festival about this time of year, or it may have been inspired by the belief that birds mate on this day.

**WASHINGTON'S BIRTHDAY**—Friday, Feb. 22—The birthday of George Washington is celebrated as a legal holiday in every state of the Union, the District of Columbia and all territories. The observance began 1796.

**SHROVE TUESDAY**—Mar. 5—Falls the day before Ash Wednesday and marks the end of the carnival season, which once began on Epiphany but is now usually celebrated the last three days before Lent. In France, the day is known as Mardi Gras (Fat Tuesday), and Mardi Gras celebrations are also held in several American cities, particularly in New Orleans. The day is sometimes called Pancake Tuesday by the English because of the need of using up fats which were prohibited during Lent.

**ASH WEDNESDAY**—Mar. 6—The first day of the Lenten season, which lasts forty

days. Having its origin sometime before A.D. 1000, it is a day of public penance and is marked in the Roman Catholic Church by the burning of the palms blessed on the previous Palm Sunday. With his thumb, the priest then marks a cross upon the forehead of each worshipper. The Anglican Church and a few Protestant groups in the United States also celebrate the day, but generally without the use of ashes.

**ST. PATRICK'S DAY**—Sunday, March 17—St. Patrick, patron saint of Ireland, has been honored in America since the first days of the nation. There are many dinners and meetings and perhaps the most notable part of the observance is the annual St. Patrick's Day parade on Fifth Avenue in New York City.

**PALM SUNDAY**—April 14—Is observed the Sunday before Easter to commemorate the entry of Jesus into Jerusalem. The procession and the ceremonies introducing the benediction of palms probably had their origin in Jerusalem.

**FIRST DAY OF PASSOVER (Pesach)**—Tuesday, Apr. 16 (Nisan 15)—The Feast of the Passover, also called the Feast of Unleavened Bread, commemorates the escape of the first-born of the Jews from the Angel of Death, who took from the Egyptians their first-born, thus fulfilling the prophecy of Moses. As the Jews fled Egypt, they ate unleavened bread, and from that time the Jews have allowed no leavening in the houses during Passover, bread being replaced by matzoth.

**GOOD FRIDAY**—April 19—This day commemorates the Crucifixion, which is retold during services from the Gospel according to St. John. A feature in Roman Catholic churches is the Mass of the Presanctified: there is no Consecration, the Host having been consecrated the previous day. The eating of hot cross buns on this day is said to have started in England.

**EASTER SUNDAY**—April 21—Observed in all Christian churches, Easter commemorates the Resurrection of Jesus. It is celebrated on the first Sunday after the full moon which occurs on or next after March 21 and is therefore celebrated be-

tween March 22 and April 25 inclusive. This date was fixed by the Council of Nicaea in 325.

**MEMORIAL DAY**—Thursday, May 30—Also known as Decoration Day, Memorial Day is a legal holiday in most of the states and in the territories, and is also observed by the armed forces. In 1868, General John A. Logan, Commander in Chief of the Grand Army of the Republic, issued an order designating the day as one in which the graves of soldiers would be decorated. The holiday was originally devoted to honoring the memory of those who fell in the Civil War, but is now also dedicated to the memory of the dead of all wars.

**ASCENSION DAY**—Thursday, May 30—Took place in the presence of His apostles 40 days after the Resurrection of Jesus. It is traditionally held to have occurred on Mount Olivet in Bethany.

**FIRST DAY OF SHABUOTH** (Hebrew Pentecost)—Wednesday, June 5 (Sivan 6)—This festival, sometimes called the Feast of Weeks, or of Harvest, or of the First Fruits, falls fifty days after Passover and originally celebrated the end of the seven-week grain harvesting season. In later tradition, it also celebrated the giving of the Law to Moses on Mt. Sinai, and both aspects have come down to the present.

**PENTECOST** (Whitsunday)—June 9—This day commemorates the descent of the Holy Ghost upon the Apostles fifty days after the Resurrection. The sermon by the Apostle Peter, which led to the baptism of 3000 who professed belief, originated the ceremonies that have since been followed. "Whitsunday" is believed to have come from "white Sunday" when, among the English, white robes were worn by those baptized on the day.

**FLAG DAY**—Friday, June 14—This day commemorates the adoption by the Continental Congress on June 14, 1777, of the Stars and Stripes as the U. S. flag. Although it is a legal holiday only in Pennsylvania, President Truman, on Aug. 3, 1949, signed a bill requesting the President to call for its observance each year by proclamation.

**INDEPENDENCE DAY**—Friday, July 4—The day of the adoption of the Declaration of Independence in 1776, celebrated in all states and territories. The observance began in the next year in the city of Philadelphia.

**LABOR DAY**—Monday, Sept. 2—Observed the first Monday in September in all states and territories, Labor Day was first celebrated in New York in 1882 under the sponsorship of the Central Labor Union, following the suggestion of Peter J. McGuire, of the Knights of Labor, that the day be set aside in honor of labor.

**FIRST DAY OF ROSH HASHANA** (Jewish New Year)—Thursday, Sept. 26 (Tishri 1)—This day marks the beginning of the Jewish year 5718 and opens the Ten Days of Penitence closing with Yom Kippur.

**YOM KIPPUR** (Day of Atonement)—Saturday, Oct. 5 (Tishri 10)—This day marks the end of the Ten Days of Penitence that began with Rosh Hashana and is the holiest day of the Jewish year. It is described in *Leviticus* as the "Sabbath of Sabbaths," and synagogue services begin the preceding sundown, resume the following morning, and continue through the day to sundown.

**FIRST DAY OF SUKKOTH** (Feast of Tabernacles)—Thursday, Oct. 10 (Tishri 15)—This festival, also known as the Feast of the Ingathering, originally celebrated the fruit harvest, and the name comes from the booths or tabernacles in which the Jews lived during the harvest, although one tradition traces it to the shelters used by the Jews in their wandering through the wilderness. During the festival, many Jews build small huts in their back yards or on the roofs of their houses.

**COLUMBUS DAY**—Saturday, Oct. 12—A legal holiday in many states, commemorating the discovery of America by Columbus in 1492. Quite likely the first celebration of Columbus Day was that organized in 1792 by the Society of St. Tammany, or Columbian Order, more widely known as Tammany Hall.

**ELECTION DAY** (in certain states)—Tuesday, Nov. 5—Since 1845, by Act of Congress, the first Tuesday after the first Monday in November is the date for choosing Presidential electors. State elections are also generally held on this day.

**VETERANS DAY**—Monday, Nov. 11—Armistice Day was established in 1926 to commemorate the signing in 1918 of the Armistice ending World War I. On June 1, 1954, the name was changed to Veterans Day so as to honor all men and women who have served America in its armed forces.

**THANKSGIVING**—Thursday, Nov. 28—Observed nationally on the fourth Thursday in November by Act of Congress (1941), the first such national proclamation having been issued by President Lincoln in 1863, on the urging of Mrs. Sarah J. Hale, editor of *Godey's Lady's Book*. Most Americans believe that the holiday dates back to the day of thanks ordered by Governor Bradford of Plymouth Colony in New England in 1621 but scholars point out that days of thanks stem from ancient times.

**FIRST SUNDAY OF ADVENT**—Dec. 1—Advent is the season in which the faithful must prepare themselves for the advent of the Saviour on Christmas. The four Sun-



days before Christmas are marked by special church services.

**FIRST DAY OF HANUKKAH** (Festival of Lights)—Wednesday, Dec. 18 (Kislev 25)—This festival was instituted by Judas Macabaeus in 165 B.C. to celebrate the purification of the Temple of Jerusalem, which had been desecrated three years earlier by Antiochus Epiphanes, who set up a pagan altar and offered sacrifices to Zeus Olympus. In Jewish homes, a light is lighted the first night, and on each succeeding night of the eight-day festival, another is lighted.

**CHRISTMAS** (Feast of the Nativity)—Wednesday, Dec. 25—The most widely cele-

brated holiday of the Christian year, Christmas is observed as the anniversary of the birth of Jesus. Christmas customs are centuries old. The mistletoe, for example, comes from the Druids, who, in hanging the mistletoe, hoped for peace and good fortune. Use of such plants as holly comes from the ancient belief that such plants blossomed at Christmas. Comparatively recent is the Christmas tree, first set up in Germany in the 17th century, and the use of candles on trees developed from the belief that candles appeared by miracle on the trees at Christmas. Colonial Manhattan Islanders introduced the name Santa Claus, a corruption of the Dutch name for the 4th-century Asia-Minor St. Nicholas.

## Movable Holidays, 1957 to 1966

### CHRISTIAN AND SECULAR

Year	Ash Wed.	Easter	Pentecost	Labor Day	Election Day	Thanksgiving	1st Sun. Advent
1957	Mar. 6	Apr. 21	June 9	Sept. 2	Nov. 5	Nov. 28	Dec. 1
1958	Feb. 19	Apr. 6	May 25	Sept. 1	Nov. 4	Nov. 27	Nov. 30
1959	Feb. 11	Mar. 29	May 17	Sept. 7	Nov. 3	Nov. 26	Nov. 29
1960	Mar. 2	Apr. 17	June 5	Sept. 5	Nov. 8	Nov. 24	Nov. 27
1961	Feb. 15	Apr. 2	May 21	Sept. 4	Nov. 7	Nov. 23	Dec. 3
1962	Mar. 7	Apr. 22	June 10	Sept. 3	Nov. 6	Nov. 22	Dec. 2
1963	Feb. 27	Apr. 14	June 2	Sept. 2	Nov. 5	Nov. 28	Dec. 1
1964	Feb. 12	Mar. 29	May 17	Sept. 7	Nov. 3	Nov. 26	Nov. 29
1965	Mar. 3	Apr. 18	June 6	Sept. 6	Nov. 2	Nov. 25	Nov. 28
1966	Feb. 23	Apr. 10	May 29	Sept. 5	Nov. 8	Nov. 24	Nov. 27

Shrove Tuesday: 1 day before Ash Wednesday.

Palm Sunday: 7 days before Easter.

Maundy Thursday: 3 days before Easter.

Good Friday: 2 days before Easter.

Holy Saturday: 1 day before Easter.

Ascension Day: 10 days before Pentecost.

Trinity Sunday: 7 days after Pentecost.

Corpus Christi: 11 days after Pentecost.

### JEWISH

Year	Purim	1st day Passover	1st day Shabuoth	1st day Rosh Hashana	Yom Kippur	1st Day Sukkoth	Simhath Torah	1st Day Hanukkah
1957	Mar. 17	Apr. 16	June 5	Sept. 26	Oct. 5	Oct. 10	Oct. 18	Dec. 18
1958	Mar. 6	Apr. 5	May 25	Sept. 15	Sept. 24	Sept. 29	Oct. 7	Dec. 7
1959	Mar. 24	Apr. 23	June 12	Oct. 3	Oct. 12	Oct. 17	Oct. 25	Dec. 26
1960	Mar. 13	Apr. 12	June 1	Sept. 22	Oct. 1	Oct. 6	Oct. 14	Dec. 14
1961	Mar. 2	Apr. 1	May 21	Sept. 11	Sept. 20	Sept. 25	Oct. 3	Dec. 3
1962	Mar. 20	Apr. 19	June 8	Sept. 29	Oct. 8	Oct. 13	Oct. 21	Dec. 22
1963	Mar. 10	Apr. 9	May 29	Sept. 19	Sept. 28	Oct. 3	Oct. 11	Dec. 11
1964	Feb. 27	Mar. 28	May 17	Sept. 7	Sept. 16	Sept. 21	Sept. 29	Nov. 30
1965	Mar. 18	Apr. 17	June 6	Sept. 27	Oct. 6	Oct. 11	Oct. 19	Dec. 19
1966	Mar. 6	Apr. 5	May 25	Sept. 15	Sept. 24	Sept. 29	Oct. 7	Dec. 8

Length of Jewish holidays (O = Orthodox, C = Conservative, R = Reform):

Passover: O & C, 8 days (holy days: first 2 and last 2); R, 7 days (holy days: first and last).

Shabuoth: O & C, 2 days; R, 1 day.

Rosh Hashana: O & C, 2 days; R, 1 day.

Yom Kippur: All groups, 1 day.

Sukkoth: All groups, 7 days (holy days: O & C, first 2; R, first only). O & C observe two additional days: Shemini

Atzereth (Eighth Day of the Feast) and Simhath Torah (Rejoicing of the Law). R observes Shemini Atzereth but not Simhath Torah.

Hanukkah: All groups, 8 days.

NOTE: All holidays begin at sundown on the evening before the date given.

# Legal Holidays in the United States, Alaska, Hawaii & Puerto Rico

## Holidays Widely Observed

**January 1, New Year's Day:** All states, D. C., Alaska, Hawaii, Puerto Rico.

**February 12, Lincoln's Birthday:** Arizona, California, Colorado, Connecticut, Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, Utah, Vermont, Washington, West Virginia, Wisconsin, Wyoming, Alaska.

**February 22, Washington's Birthday:** All states, D. C., Alaska, Hawaii, Puerto Rico.

**May 30, Memorial (or Decoration) Day:** All states (except Alabama, Georgia, Mississippi, South Carolina, Texas), D. C., Alaska, Hawaii, Puerto Rico.

**July 4, Independence Day:** All states, D. C., Alaska, Hawaii, Puerto Rico.

**September (1st Monday), Labor Day:** All states, D. C., Alaska, Hawaii, Puerto Rico.

**October 12, Columbus Day:** All states (except Arkansas, D. C., Idaho, Iowa, Maine, Mississippi, Nevada, North Carolina, Oregon, South Carolina, South Dakota, Tennessee, Virginia, Wyoming), Puerto Rico.

**November (1st Tuesday after 1st Monday), Election Day:** Arizona, Arkansas, California, Colorado, Delaware, Florida, Illinois, Indiana, Iowa, Kentucky, Maryland, Michigan, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Virginia, Washington, West Virginia, Wisconsin, Hawaii, Puerto Rico.

**November 11, Veterans Day (formerly Armistice Day):** All states (except Virginia), D. C., Alaska, Hawaii, Puerto Rico.

**November (4th Thursday), Thanksgiving Day:** All states (last Thursday in Texas), D. C., Alaska, Hawaii, Puerto Rico.

**December 25, Christmas:** All states, D. C., Alaska, Hawaii, Puerto Rico.

## Other Holidays

**January 6, Three Kings' Day:** Puerto Rico.

**January 8, Battle of New Orleans:** Louisiana.

**January 11, De Hostos' Birthday:** Puerto Rico.

**January 19, Robert E. Lee's Birthday:** Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia.

**January 20, Inauguration Day (every 4 yrs.):** D. C., Louisiana (Baton Rouge, only).

**January 30, F. D. Roosevelt's Birthday:** Kentucky.

**February or March (1 day before Ash Wednesday), Mardi Gras (Shrove Tuesday):** Alabama, Florida (in certain counties), Louisiana (in certain parishes and municipalities).

**February 14, Admission Day:** Arizona.

**March (first Tuesday), Town Meeting Day:** Vermont.

**March or April (some day between Mar. 1 to Apr. 15), Arbor Day:** Utah.

**March 2, Texas Independence Day.**

**March 15, Andrew Jackson's Birthday:** Tennessee.

**March or April (2 days before Easter), Good Friday:** California (12 M.-3 P.M.), Connecticut, Delaware, Florida, Illinois, Indiana, Louisiana, Maryland, New Jersey, North Dakota, Pennsylvania, Tennessee, Puerto Rico.

**March or April (1 day after Easter), Easter Monday:** North Carolina.

**March 22, Emancipation Day:** Puerto Rico.

**March 25, Maryland Day.**

**March 26, Kuhio Day:** Hawaii.

**March 30, Seward's Day:** Alaska.

**April 12, Halifax Resolutions Anniversary:** North Carolina.

**April 13, Thomas Jefferson's Birthday:** Alabama, Missouri, Oklahoma.

**April 16, De Diego's Birthday:** Puerto Rico.

**April 19, Patriots' Day:** Maine, Massachusetts.

**April 21, San Jacinto Day:** Texas.

**April 22, Arbor Day:** Nebraska.

**April 22, Oklahoma Day.**

**April 26, Confederate Memorial Day:** Alabama, Florida, Georgia, Mississippi.

**April (4th Monday), Fast Day:** New Hampshire.

**May 4, Rhode Island Independence Day.**

**May (2nd Sunday), Mother's Day:** Arizona, Oklahoma.

**May 10, Confederate Memorial Day:** North Carolina, South Carolina.

**May 20, Mecklenburg Independence Day:** North Carolina.

**June 3, Jefferson Davis' Birthday:** Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, Tennessee, Texas.

**June 9, Senior Citizens Day:** Oklahoma.

**June 11, Kamehameha Day:** Hawaii.

**June 14, Flag Day:** Pennsylvania.

**June 20, West Virginia Day.**

**June (3rd Sunday), Father's Day:** Arizona.

**July 13, Nathan Bedford Forrest's Birthday:** Tennessee.

**July 17, Muñoz Rivera's Birthday:** Puerto Rico.

**July 24, Pioneer Day:** Utah.

**July 25, Constitution Day:** Puerto Rico.

**July 27, Barbosa's Birthday:** Puerto Rico.

**August 1, Colorado Day.**

**August 14, World War II Memorial:** Arkansas.

**August 16, Bennington Battle Day:** Vermont.

**August 30, Huey P. Long Day:** Louisiana.

**September (1st Saturday after full moon), Indian Day:** Oklahoma.

**September 9, Admission Day:** California.

**September 12, Defenders' Day:** Maryland.

**September 16, Cherokee Strip Day:** Oklahoma.

**October (Thursday of State Fair Week):** South Carolina (in counties where Fair is held).

**October 10, Oklahoma Historical Day.**

**October 18, Alaska Day.**

**October 31, Admission Day:** Nevada.

**November 1, All Saints' Day:** Louisiana.

**November 4, Will Rogers Day:** Oklahoma.

**November 19, Discovery Day:** Puerto Rico.

**December 10, Wyoming Day.**

**December 26, Day after Christmas:** South Carolina.

# AWARDS



## NOBEL PRIZES

The Nobel prizes are awarded under the will of Alfred Bernhard Nobel, Swedish chemist and engineer, who died in 1896. The interest of the fund is divided annually among the persons who have made the most outstanding contributions in the field of physics, chemistry, and physiology or medicine, who have produced the most distinguished literary work of an idealist tendency, and who have contributed most toward world peace.

The prizes for physics and chemistry are awarded by the Swedish Academy of Science in Stockholm, the one for physiology or medicine by the Caroline Medical Institute in Stockholm, that for literature by the academy in Stockholm, and that for peace by a committee of five elected by the Norwegian Storting. The distribution of prizes was begun on December 10, 1901, the anniversary of Nobel's death. The amount of each prize varies with the income from the fund and since 1936 has stood at approximately £8,000.

No Nobel prizes were awarded for 1940, 1941 and 1942; prizes for Literature and Peace were not awarded for 1943.

Year	Literature	Peace
1901	René F. A. Sully Prudhomme (France)	Henri Dunant (Switzerland) and Frederick Passy (France)
1902	Theodor Mommsen (Germany)	Elie Ducommun and Albert Gobat (Switzerland)
1903	Björnstjerne Björnson (Norway)	Sir William R. Cremer (England)
1904	Frédéric Mistral (France) and José Echegaray (Spain)	Institut de Droit International (Belgium)
1905	Henryk Sienkiewicz (Poland)	Bertha von Suttner (Austria)
1906	Giosuè Carducci (Italy)	Theodore Roosevelt (U. S.)
1907	Rudyard Kipling (England)	Ernesto T. Moneta (Italy) and Louis Renault (France)
1908	Rudolf Eucken (Germany)	Klas P. Arnoldson (Sweden) and Frederik Bajer (Denmark)
1909	Selma Lagerlöf (Sweden)	Auguste M. F. Beernaert (Belgium) and Baron Paul H. B. d'Estournelles de Constant de Rebecque (France)
1910	Paul von Heyse (Germany)	The Bureau International Permanent de la Paix (Switzerland)
1911	Maurice Maeterlinck (Belgium)	Tobias M. C. Asser (Holland) and Alfred H. Fried (Austria)
1912	Gerhart Hauptmann (Germany)	Elihu Root (U. S.)
1913	Rabindranath Tagore (India)	Henri La Fontaine (Belgium)
1915	Romain Rolland (France)	No award
1916	Verner von Heidenstam (Sweden)	No award
1917	Karl Gjellerup (Denmark) and Henrik Pontoppidan (Denmark)	International Red Cross
1919	Carl Spitteler (Switzerland)	Woodrow Wilson (U. S.)
1920	Knut Hamsun (Norway)	Léon Bourgeois (France)
1921	Anatole France (France)	Karl H. Branting (Sweden) and Christian L. Lange (Norway)
1922	Jacinto Benavente (Spain)	Fridtjof Nansen (Norway)
1923	William B. Yeats (Ireland)	No award
1924	Wladyslaw Reymont (Poland)	No award
1925	George Bernard Shaw (England)	Sir Austen Chamberlain (England) and Charles G. Dawes (U. S.)
1926	Grazia Deledda (Italy)	Aristide Briand (France) and Gustav Stresemann (Germany)
1927	Henri Bergson (France)	Ferdinand Buisson (France) and Ludwig Quide (Germany)
1928	Sigrid Undset (Norway)	No award
1929	Thomas Mann (Germany)	Frank B. Kellogg (U. S.)
1930	Sinclair Lewis (U. S.)	Lars O. J. Söderblom (Sweden)
1931	Erik A. Karlfeldt (Sweden)	Jane Addams (U. S.) and Nicholas M. Butler (U. S.)
1932	John Galsworthy (England)	No award
1933	Ivan G. Bunin (Russia)	Sir Norman Angell (England)
1934	Luigi Pirandello (Italy)	Arthur Henderson (England)
1935	No award	Carl von Ossietzky (Germany)
1936	Eugene O'Neill (U. S.)	Carlos de S. Lamas (Argentina)
1937	Roger Martin du Gard (France)	Lord Cecil of Chelwood (England)
1938	Pearl S. Buck (U. S.)	Office International Nansen pour les Réfugiés (Switzerland)
1939	Frans Eemil Sillanpää (Finland)	No award
1944	Johannes V. Jensen (Denmark)	International Red Cross
1945	Gabriela Mistral (Chile)	Cordell Hull (U. S.)



Year	Literature	Peace
1946	Hermann Hesse (Switzerland)	Emily G. Balch and John R. Mott (U. S.)
1947	André Gide (France)	American Friends Service Committee (U. S.) and British Society of Friends' Service Council (England)
1948	Thomas Stearns Eliot (England)	No award
1949	William Faulkner (U. S.)	Lord John Boyd Orr (Scotland)
1950	Bertrand Russell (England)	Ralph J. Bunche (U. S.)
1951	Pär Lagerkvist (Sweden)	Léon Jouhaux (France)
1952	François Mauriac (France)	Albert Schweitzer (Fr. Eq. Af.)
1953	Sir Winston Churchill (England)	George C. Marshall (U. S.)
1954	Ernest Hemingway (U. S.)	Office of U.N. High Commissioner for Refugees
1955	Halldór Kiljan Laxness (Iceland)	No award

Year	Physics	Chemistry	Medicine
1901	Wilhelm K. Roentgen, for discovery of Roentgen rays.	Jacobus H. van 't Hoff; laws of chemical dynamics and osmotic pressure in solutions.	Emil A. von Behring, for work on serum therapy against diphtheria.
1902	Hendrik A. Lorentz and Pieter Zeeman, for work on influence of magnetism upon radiation.	Emil Fischer, for experiments in sugar and purin groups of substances.	Sir Ronald Ross, for work on malaria.
1903	A. Henri Becquerel, work on discovery of spontaneous radioactivity. Pierre and Marie Curie; study of radiation.	Svante A. Arrhenius, for his electrolytic theory of dissociation.	Niels R. Finsen, for his treatment of lupus vulgaris, with concentrated light rays.
1904	John Strutt (Lord Rayleigh) for discovery of argon in investigating gas density.	Sir William Ramsay; discovery and determination of place of inert gaseous elements in air.	Ivan P. Pavlov, for work on the physiology of digestion.
1905	Philipp Lenard, for work with cathode rays.	Adolf von Baeyer, for work on organic dyes and hydroaromatic combinations.	Robert Koch, for work on tuberculosis.
1906	Joseph J. Thomson, for investigations on passage of electricity through gases.	Henri Moissan, for isolation of fluorine, and introduction of electric furnace.	Camillo Golgi and Santiago Ramón y Cajal, for work on structure of the nervous system.
1907	Albert A. Michelson, for spectroscopic and metrologic investigations.	Eduard Buchner; discovery of cell-less fermentation and investigations in biological chemistry.	Charles L. A. Laveran, for work with protozoa in the generation of disease.
1908	Gabriel Lippmann, for method of reproducing colors by photography.	Ernest Rutherford, for investigations into disintegration of elements and chemistry of radioactive substances.	Paul Ehrlich and Élie Metchnikoff, for work on immunity.
1909	Guglielmo Marconi and Ferdinand Braun, for development of wireless.	Wilhelm Ostwald, for work on catalysis and investigations into chemical equilibrium and reaction rates.	Theodor Kocher, for work on the thyroid gland.
1910	Johannes D. van der Waals, for work with the equation of state for gases and liquids.	Otto Wallach, for work in the field of alicyclic compounds.	Albrecht Kossel, for achievements in the chemistry of the cell.
1911	Wilhelm Wien, for his laws governing the radiation of heat.	Marie Curie, for discovery of elements radium and polonium.	Allvar Gullstrand, for work on the dioptrics of the eye.
1912	Gustaf Dalén, for discovery of automatic regulators used in lighting lighthouses and light buoys.	Victor Grignard, for reagent discovered by and named after him. Paul Sabatier, for the methods of hydrogenating organic compounds.	Alexis Carrel, for work on vascular ligature and grafting of blood vessels and organs.

	Physics	Chemistry	Medicine
13	H. Kamerlingh Onnes, for work leading to production of liquid helium.	Alfred Werner, for linking up atoms within the molecule.	Charles Richet, for work on anaphylaxis.
14	Max von Laue, for discovery of diffraction of Roentgen rays passing through crystals.	Theodore W. Richards, for determining atomic weight of many chemical elements.	Robert Bárány, for work on physiology and pathology of the vestibular system.
15	W. H. Bragg and W. L. Bragg, for analysis of crystal structure by means of X rays.	Richard Willstätter, for research into coloring matter of plants, especially chlorophyll.	No award.
17	Charles G. Barkla, discovery of Roentgen radiation of the elements.	No award.	No award.
18	Max Planck, for discoveries in connection with quantum theory.	Fritz Haber, for synthetic production of ammonia.	No award.
19	Johannes Stark, discovery of Doppler effect in Canal rays and decomposition of spectrum lines by electric fields.	No award.	Jules Bordet, for discoveries in connection with immunity.
20	Charles E. Guillaume, for discoveries of anomalies in nickel steel alloys.	Walther Nernst, for work in thermochemistry.	August Krogh, discovery of regulation of capillaries' motor mechanism.
21	Albert Einstein, for discovery of the law of the photoelectric effect.	Frederick Soddy, for investigations into origin and nature of isotopes.	No award.
22	Niels Bohr, for investigations of structure of atoms and radiations emanating from them.	Francis W. Aston, for discovery of isotopes in nonradioactive elements and for discovery of the whole number rule.	In 1923 the 1922 prize was divided between Archibald V. Hill for discovery relating to heat-production in muscles; and Otto Meyerhof, for correlation between consumption of oxygen and production of lactic acid in muscles.
23	Robert A. Millikan, work on elementary charge of electricity and photoelectric phenomena.	Fritz Pregl, for method of microanalysis of organic substances discovered by him.	Frederick G. Banting and John J. R. Macleod, for discovery of insulin.
24	Karl M. G. Siegbahn, for investigations in X-ray spectroscopy.	No award.	Willem Einthoven, for discovering the mechanism of the electrocardiogram.
25	James Franck and Gustav Hertz, for discovery of laws governing impact of electrons upon atoms.	In 1926 the 1925 prize was awarded to Richard Zsigmondy, for work on the heterogeneous nature of colloid solutions.	No award.
26	Jean Perrin, for works on discontinuous structure of matter and discovery of the equilibrium of sedimentation.	The Svedberg, for work on disperse systems.	Johannes Fibiger, for discovery of the Spiroptera carcinoma.
27	Arthur H. Compton, discovery of Compton phenomenon; and Charles T. R. Wilson, for method of perceiving paths taken by electrically charged particles.	In 1928 the 1927 prize was awarded to Heinrich Wieland, for investigations of bile acids and kindred substances.	Julius Wagner-Jauregg, for use of malaria inoculation in treatment of dementia paralytica.

Year	Physics	Chemistry	Medicine
1928	In 1929 the 1928 prize was awarded to Owen W. Richardson, for work on the phenomenon of thermionics and discovery of the Richardson Law.	Adolf Windaus, for investigations on constitution of the sterols and their connection with vitamins.	Charles Nicolle, for work on typhus exanthematicus.
1929	Prince Louis Victor de Broglie, for discovery of the wave character of electrons.	Arthur Harden and Hans K. A. S. von Euler-Chelpin, for research of fermentation of sugars.	Christiaan Eijkman, for discovery of the antineuritic vitamins; and Sir Frederick G. Hopkins, for discovery of growth promoting vitamins.
1930	Sir Chandrasekhara V. Raman, for work on diffusion of light and discovery of the Raman effect.	Hans Fischer, for work on coloring matter of blood and leaves and for his synthesis of hemin.	Karl Landsteiner, for discovery of human blood groups.
1931	No award.	Karl Bosch and Friedrich Bergius, for invention and development of chemical high-pressure methods.	Otto H. Warburg, for discovery of the character and mode of action of the respiratory ferment.
1932	In 1933 the prize for 1932 was awarded to Werner Heisenberg, for creation of the quantum mechanics.	Irving Langmuir, for work in realm of surface chemistry.	Sir Charles S. Sherrington and Edgar D. Adrian, for discoveries of the function of the neuron.
1933	Erwin Schrödinger and Paul A. M. Dirac, for discovery of new fertile forms of the atomic theory.	No award.	Thomas H. Morgan, for discoveries on hereditary function of the chromosomes.
1934	No award.	Harold C. Urey, for discovery of heavy hydrogen.	George H. Whipple, George R. Minot, and William P. Murphy, for discovery of liver therapy against anemias.
1935	James Chadwick, for discovery of the neutron.	Frédéric and Irène Joliot-Curie, for synthesis of new radioactive elements.	Hans Spemann, for discovery of the organizing effect in embryonic development.
1936	Victor F. Hess, for discovery of cosmic radiation; and Carl D. Anderson, for discovery of the positron.	Peter J. W. Debye, for investigations on dipole moments and diffraction of X rays and electrons in gases.	Sir Henry H. Dale and Otto Loewi, for discoveries on chemical transmission of nerve impulses.
1937	Clinton J. Davisson and George P. Thomson, for discovery of diffraction of electrons by crystals.	Walter N. Haworth, for research on carbohydrates and vitamin C; and Paul Karrer, for work on carotenoids, flavins and vitamins A and B.	Albert Szent-Györgyi and Nagrapolt, for discoveries on biological combustion.
1938	Enrico Fermi, for identification of new radioactivity elements and discovery of nuclear reactions effected by slow neutrons.	Richard Kuhn, for carotenoid study and vitamin research (declined the prize).	Cornellie Heymans, for importance of sinus aorta mechanisms in regulation of respiration.
1939	Ernest Orlando Lawrence, for the development of the cyclotron.	Adolf Friedrich Johann Butenandt, for work on sexual hormones (declined the prize); and Leopold Ružička, work with polymethylenes.	Gerhard Domagk, antibacterial effect of prontosil.



Year	Physics	Chemistry	Medicine
1943	Otto Stern, for detection of magnetic momentum of protons.	George Hevesy De Heves, for work on use of isotopes as chemical indicators.	Henrik Dam, Edward A. Doisy for the discovery of the chemical nature of Vitamin K.
1944	Isidor Isaac Rabi, for work on magnetic movements of atomic particles.	Otto Hahn, for work on atomic fission.	Joseph Erlanger and Herbert Spencer Gasser, for work on functions of the nerve threads.
1945	Wolfgang Pauli, for work on atomic fissions.	Artturi Ilmari Virtanen, for research in the field of conservation of fodder.	Sir Alexander Fleming, Ernst Boris Chain, and Sir Howard Florey, for discovery of penicillin.
1946	Percy Williams Bridgman, studies and inventions in high-pressure physics.	James B. Sumner, crystallizing of enzymes. John H. Northrop and Wendell M. Stanley, preparing enzymes and virus proteins in pure form.	Herman J. Muller, hereditary effects of X ray on genes.
1947	Sir Edward Appleton, for discovery of layer which reflects radio short waves in the ionosphere.	Sir Robert Robinson, for research in plant substances.	Carl F. and Gerty T. Cori, for work on animal starch metabolism; Bernardo A. Houssay, for hormone study of pituitary gland.
1948	Patrick M. S. Blackett, for improvement on Wilson chamber, discoveries in cosmic radiation.	Arne Tiselius, for biochemical discoveries and isolation of mouse paralysis virus.	Paul Mueller, for discovery of insect-killing properties of DDT.
1949	Hideki Yukawa, for mathematical prediction, 14 years ago, of the meson.	William Francis Glauque, for research in thermodynamics, especially effects of low temperature.	Walter Rudolf Hess, for research on brain control of body; and Antonio Caetano de Abreu Freire Egas Moniz, for development of brain operation to treat mental disease.
1950	Cecil Frank Powell, for method of photographic study of atom nucleus, and for discoveries about mesons.	Otto Diels and Kurt Adler, for dien synthesis for artificial manufacture of odors and complicated compounds.	Philip S. Hench, Edward C. Kendall, and Tadeus Reichstein, for discoveries about hormones of adrenal cortex.
1951	Sir John Douglas Cockcroft and Ernest T. S. Walton, for work in 1932 on transmutation of atomic nuclei.	Glenn T. Seaborg and Edwin M. McMillan, for discovery of plutonium.	Max Theiler, for development of anti-yellow-fever vaccine.
1952	Edward Mills Purcell and Felix Bloch, for work in measurement of magnetic fields in atomic nuclei.	Archer John Porter Martin and Richard Laurence Millington Synge, for development of the partition chromatography process (coloring, identifying, separating compounds).	Selman A. Waksman, for co-discovery of streptomycin.
1953	Fritz Zernike, for development of "phase contrast" microscope.	Hermann Staudinger, for research in giant molecules.	Fritz A. Lipmann and Hans Adolph Krebs, for studies of living cells.
1954	Max Born, for work in quantum mechanics; and Walther Bothe, for work in cosmic radiation.	Linus Pauling, for study of forces holding together protein and other molecules.	John F. Enders, Thomas H. Weller and Frederick C. Robbins, for work with cultivation of polio virus.
1955	Polykarp Kusch and Willis E. Lamb, for work in atomic measurement.	Vincent du Vigneaud, for work on pituitary hormones.	Hugo Theorell, for work on oxidation enzymes.

(For 1956 Nobel prize winners, see Nobel prizes in index.)

## Pulitzer Prize Awards

Source: Columbia University, New York. (For years not listed, no award was made.)

### Pulitzer Prizes in Journalism

#### Meritorious Public Service

- 1918 *New York Times*
- 1919 *Milwaukee Journal*
- 1921 *Boston Post*
- 1922 *New York World*
- 1923 *Memphis Commercial Appeal*
- 1924 *New York World*
- 1926 *Columbus (Ga.) Enquirer Sun*
- 1927 *Canton (Ohio) Daily News*
- 1928 *Indianapolis Times*
- 1929 *New York Evening World*
- 1931 *Atlanta Constitution*
- 1932 *Indianapolis News*
- 1933 *New York World-Telegram*
- 1934 *Medford (Oreg.) Mail Tribune*
- 1935 *Sacramento Bee*
- 1936 *Cedar Rapids (Iowa) Gazette*
- 1937 *St. Louis Post-Dispatch*
- 1938 *Bismarck (N. Dak.) Tribune; Special Bronze Plaque: Edmonton (Alberta) Journal*
- 1939 *Miami Daily News*
- 1940 *Waterbury (Conn.) Republican & American*
- 1941 *St. Louis Post-Dispatch*
- 1942 *Los Angeles Times*
- 1943 *Omaha World-Herald*
- 1944 *New York Times*
- 1945 *Detroit Free Press*
- 1946 *Scranton (Pa.) Times*
- 1947 *Baltimore Sun*
- 1948 *St. Louis Post-Dispatch*
- 1949 (Lincoln) *Nebraska State Journal*
- 1950 *Chicago Daily News; St. Louis Post-Dispatch*
- 1951 *Miami Herald; Brooklyn Eagle*
- 1952 *St. Louis Post-Dispatch*
- 1953 *Whiteville (N. C.) News Reporter; Tabor City (N. C.) Tribune*
- 1954 (Garden City, L. I.) *Newsday*
- 1955 *Columbus (Ga.) Ledger & Sunday Ledger-Enquirer*
- 1956 *Watsonville (Calif.) Register-Pajaronian*

#### Editorial

- 1917 *New York Tribune*
- 1918 *Louisville Courier-Journal*
- 1920 HARVEY E. NEWBRANCH (*Omaha Evening World-Herald*)
- 1922 FRANK M. O'BRIEN (*New York Herald*)

- 1923 WILLIAM ALLEN WHITE (*Emporia [Kans.] Gazette*)
- 1924 *Boston Herald; Special prize: FRANK I. COBB (New York World)*
- 1925 *Charleston (S. C.) News and Courier*
- 1926 *New York Times (Edward M. Kingsbury)*
- 1927 *Boston Herald (F. Lauriston Bullard)*
- 1928 GROVER CLEVELAND HALL (*Montgomery [Ala.] Advertiser*)
- 1929 LOUIS ISAAC JAFFE (*Norfolk Virginian-Pilot*)
- 1931 CHARLES S. RYCKMAN (*Fremont [Nebr.] Tribune*)
- 1933 *Kansas City (Mo.) Star*
- 1934 E. P. CHASE (*Atlantic [Iowa] News Telegraph*)
- 1936 FELIX MORLEY (*Washington [D.C.] Post*); GEORGE B. PARKER (*Scripps-Howard Newspapers*)
- 1937 JOHN W. OWENS (*Baltimore Sun*)
- 1938 W. W. WAYMACK (*Des Moines Register & Tribune*)
- 1939 RONALD G. CALLVERT (*Portland Oregonian*)
- 1940 BART HOWARD (*St. Louis Post-Dispatch*)
- 1941 REUBEN MAURY (*New York Daily News*)
- 1942 GEOFFREY PARSONS (*New York Herald Tribune*)
- 1943 FORREST W. SEYMOUR (*Des Moines Register & Tribune*)
- 1944 *Kansas City (Mo.) Star (Henry J. Haskell)*
- 1945 GEORGE W. POTTER (*Providence [R. I.] Journal-Bulletin*)
- 1946 HODDING CARTER (*[Greenville, Miss.] Delta Democrat-Times*)
- 1947 WILLIAM H. GRIMES (*Wall Street Journal*)
- 1948 VIRGINIUS DABNEY (*Richmond Times-Dispatch*)
- 1949 JOHN H. CRIDER (*Boston Herald*) HERBERT ELLISTON (*Washington Post*)
- 1950 CARL M. SAUNDERS (*Jackson [Mich.] Citizen Patriot*)
- 1951 WILLIAM H. FITZPATRICK (*New Orleans States*)

- 1952 LOUIS LACOSS (*St. Louis Globe-Democrat*)
- 1953 VERMONT C. ROYSTER (*Wall Street Journal*)
- 1954 DONALD M. MURRY (*Boston Herald*)
- 1955 ROYCE HOWES (*Detroit Free Press*)
- 1956 LAUREN K. SOTH (*Des Moines Register & Tribune*)

#### Correspondence

- 1929 PAUL SCOTT MOWRER (*Chicago Daily News*)
- 1930 LELAND STOWE (*New York Herald Tribune*)
- 1931 H. R. KNICKERBOCKER (*Philadelphia Public Ledger and New York Evening Post*)
- 1932 WALTER DURANTY (*New York Times*); CHARLES G. ROSS (*St. Louis Post-Dispatch*)
- 1933 EDGAR ANSEL MOWRER (*Chicago Daily News*)
- 1934 FREDERICK T. BIRCHALL (*New York Times*)
- 1935 ARTHUR KROCK (*New York Times*)
- 1936 WILFRED C. BARBER (*Chicago Tribune*)
- 1937 ANNE O'HARE MCCORMICK (*New York Times*)
- 1938 ARTHUR KROCK (*New York Times*)
- 1939 LOUIS P. LOCHNER (*Associated Press*)
- 1940 OTTO D. TOLISCHUS (*New York Times*)
- 1941 Group award\*
- 1942 CARLOS P. ROMULO (*Philippines Herald*)
- 1943 HANSON W. BALDWIN (*New York Times*)
- 1944 ERNIE PYLE (*Scripps Howard Newspaper Alliance*)
- 1945 HAROLD V. (HAL) BOYL (*Associated Press*)
- 1946 ARNALDO CORTESI (*New York Times*)
- 1947 BROOKS ATKINSON (*New York Times*)
- 1948 Discontinued

\*For the public services and the individual achievements of American news reporters in the war zones.

#### Cartoon

- 1922 ROLLIN KIRBY (*New York World*)
- 1924 JAY NORWOOD DARLIN (*New York Tribune*)
- 1925 ROLLIN KIRBY (*New York World*)

- 1926 D. R. FITZPATRICK (*St. Louis Post-Dispatch*)
- 1927 NELSON HARDING (*Brooklyn Eagle*)
- 1928 NELSON HARDING (*Brooklyn Eagle*)
- 1929 ROLLIN KIRBY (*New York World*)
- 1930 CHARLES R. MACAULEY (*Brooklyn Eagle*)
- 1931 EDMUND DUFFY (*Baltimore Sun*)
- 1932 JOHN T. MCCUTCHEON (*Chicago Tribune*)
- 1933 HAROLD MORTON TALBURT (*Washington Daily News*)
- 1934 EDMUND DUFFY (*Baltimore Sun*)
- 1935 ROSS A. LEWIS (*Milwaukee Journal*)
- 1937 CLARENCE DANIEL BATCHELOR (*New York Daily News*)
- 1938 VAUGHN SHOEMAKER (*Chicago Daily News*)
- 1939 CHARLES G. WERNER (*Daily Oklahoman* [Oklahoma City])
- 1940 EDMUND DUFFY (*Baltimore Sun*)
- 1941 JACOB BURCK (*Chicago Times*)
- 1942 HERBERT L. BLOCK (NEA Service)
- 1943 JAY NORWOOD DARLING (*New York Herald Tribune*)
- 1944 CLIFFORD K. BERRYMAN (*Washington* [D. C.] *Evening Star*)
- 1945 BILL MAULDIN (United Features Syndicate, Inc.)
- 1946 BRUCE ALEXANDER RUSSELL (*Los Angeles Times*)
- 1947 VAUGHN SHOEMAKER (*Chicago Daily News*)
- 1948 RUBE GOLDBERG (*New York Sun*)
- 1949 LUTE PEASE (*Newark Evening News*)
- 1950 JAMES T. BERRYMAN (*Washington* [D. C.] *Evening Star*)
- 1951 REG (REGINALD W.) MANNING (*Arizona Republic* [Phoenix])
- 1952 FRED L. PACKER (*New York Mirror*)
- 1953 EDWARD D. KUEKES (*Cleveland Plain Dealer*)
- 1954 HERBERT L. BLOCK (*Washington* [D. C.] *Post*)
- 1955 DANIEL R. FITZPATRICK (*St. Louis Post-Dispatch*)
- 1956 ROBERT YORK (*Louisville Times*)
- News Photography**
- 1942 MILTON BROOKS (*Detroit News*)
- 1943 FRANK NOEL (Associated Press)
- 1944 FRANK FILAN (Associated Press) EARLE L. BUNKER (*Omaha World-Herald*)
- 1945 JOE ROSENTHAL (Associated Press)
- 1947 ARNOLD HARDY
- 1948 FRANK CUSHING (*Boston Traveler*)
- 1949 NAT FEIN (*New York Herald Tribune*)
- 1950 BILL CROUCH (*Oakland Tribune*)
- 1951 MAX DESFOR (Associated Press)
- 1952 JOHN ROBINSON & DON ULTANG (*Des Moines Register & Tribune*)
- 1953 WILLIAM M. GALLAGHER (*Flint* [Mich.] *Journal*)
- 1954 MRS. WALTER M. SCHAU
- 1955 JOHN L. GAUNT, JR. (*Los Angeles Times*)
- 1956 *New York Daily News*
- National Telegraphic Reporting**
- 1942 LOUIS STARK (*New York Times*)
- 1944 DEWEY L. FLEMING (*Baltimore Sun*)
- 1945 JAMES B. RESTON (*New York Times*)
- 1946 EDWARD A. HARRIS (*St. Louis Post-Dispatch*)
- 1947 EDWARD T. FOLLIARD (*Washington* [D. C.] *Post*)
- National Reporting**
- 1948 BERT ANDREWS (*New York Herald Tribune*); NAT S. FINNY (*Minneapolis Tribune*)
- 1949 C. P. TRUSSELL (*New York Times*)
- 1950 EDWIN O. GUTHMAN (*Seattle Times*)
- 1952 ANTHONY LEVIERO (*New York Times*)
- 1953 DON WHITEHEAD (Associated Press)
- 1954 RICHARD L. WILSON (*Cowles Newspapers*)
- 1955 ANTHONY LEWIS (*Washington Daily News*)
- 1956 CHARLES L. BARTLETT (*Chattanooga Times*)
- International Telegraphic Reporting**
- 1942 LAURENCE EDMUND ALLEN (Associated Press)
- 1943 IRA WOLFERT (North American Newspaper Alliance, Inc.)
- 1944 DANIEL DE LUCE (Associated Press)
- 1945 MARK S. WATSON (*Baltimore Sun*)
- 1946 HOMER W. BIGART (*New York Herald Tribune*)
- 1947 EDDY GILMORE (Associated Press)
- International Reporting**
- 1948 PAUL W. WARD (*Baltimore Sun*)
- 1949 PRICE DAY (*Baltimore Sun*)
- 1950 EDMUND STEVENS (*Christian Science Monitor*)
- 1951 KEYES BEECH & FRED SPARKS (*Chicago Daily News*); HOMER BIGART & MARGUERITE HIGGINS (*New York Herald Tribune*); RELMAN MORIN & DON WHITEHEAD (Associated Press)
- 1952 JOHN M. HIGHTOWER (Associated Press)
- 1953 AUSTIN C. WEHRWEIN (*Milwaukee Journal*)
- 1954 JIM G. LUCAS (Scripps-Howard Newspapers)
- 1955 HARRISON E. SALISBURY (*New York Times*)
- 1956 WILLIAM RANDOLPH HEARST, JR., & FRANK CONNIFF (Hearst newspapers) & KINGSLEY SMITH (INS)
- Reporting**
- 1917 HERBERT B. SWOPE (*New York World*)
- 1918 HAROLD A. LITLEDAL (*New York Evening Post*)
- 1920 JOHN J. LEARY, JR. (*New York World*)
- 1921 LOUIS SEIBOLD (*New York World*)
- 1922 KIRKE L. SIMPSON (Associated Press)
- 1923 ALVA JOHNSTON (*New York Times*)
- 1924 MAGNER WHITE (*San Diego Sun*)
- 1925 JAMES W. MULROY & ALVIN H. GOLDSTEIN (*Chicago Daily News*)
- 1926 WILLIAM BURKE MILLER (*Louisville Courier-Journal*)
- 1927 JOHN T. ROGERS (*St. Louis Post-Dispatch*)
- 1929 PAUL Y. ANDERSON (*St. Louis Post-Dispatch*)
- 1930 RUSSELL D. OWEN (*New York Times*); Special award: W. O. DAPPING (*Auburn* [N. Y.] *Citizen*)
- 1931 A. B. MACDONALD (*Kansas City* [Mo.] *Star*)
- 1932 W. C. RICHARDS, D. D. MARTIN, J. S. POOLER, F. D. WEBB, J. N. W. SLOAN (all of *Detroit Free Press*)



- 1933 FRANCIS A. JAMIESON (Associated Press)  
 1934 ROYCE BRIER (*San Francisco Chronicle*)  
 1935 WILLIAM H. TAYLOR (*New York Herald Tribune*)  
 1936 LAUREN D. LYMAN (*New York Times*)  
 1937 JOHN J. O'NEILL (*New York Herald Tribune*), WILLIAM LEONARD LAURENCE (*New York Times*), HOWARD W. BLAKESLEE (Associated Press), GOBIND BEHARI LAL (Universal Service), DAVID DIETZ (Scripps-Howard Newspapers)  
 1938 RAYMOND SPRIGLE (*Pittsburgh Post-Gazette*)  
 1939 THOMAS L. STOKES (*New York World-Telegram*)  
 1940 S. BURTON HEATH (*New York World-Telegram*)  
 1941 WESTBROOK PEGLER (*New York World-Telegram*)  
 1942 STANTON DELAPLANE (*San Francisco Chronicle*)  
 1943 GEORGE WELLER (*Chicago Daily News*)  
 1944 PAUL SCHOENSTEIN & ASSOCIATES (*New York Journal-American*)  
 1945 JACK S. McDOWELL (*San Francisco Call-Bulletin*)  
 1946 WILLIAM LEONARD LAURENCE (*New York Times*)  
 1947 FREDERICK WOLTMAN (*New York World-Telegram*)

#### Local Reporting

- 1948 GEORGE E. GOODWIN (*Atlanta Journal*)

- 1949 MALCOLM JOHNSON (*New York Sun*)  
 1950 MEYER BERGER (*New York Times*)  
 1951 EDWARD S. MONTGOMERY (*San Francisco Examiner*)  
 1952 GEORGE DE CARVALHO (*San Francisco Chronicle*)  
 1953 Reporting and photographic staffs (*Providence Journal & Evening Bulletin*); EDWARD J. MOWERY (*New York World-Telegram & Sun*)  
 1954 Vicksburg (Miss.) *Sunday Post-Herald*; ALVIN SCOTT MCCOY (*Kansas City [Mo.] Star*)  
 1955 MRS. CARO BROWN (Alice [Tex.] *Daily Echo*); ROLAND KENNETH TOWERY (*Cuero [Tex.] Record*)  
 1956 LEE HILLS (*Detroit Free Press*); ARTHUR DALEY (*New York Times*)

#### Special Citation

- 1941 *New York Times* for the public educational value of its foreign news report.  
 1944 BYRON PRICE, Director of the Office of Censorship, for the creation and administration of the newspaper and radio codes.  
 1945 MRS. WILLIAM ALLEN WHITE, for her husband's interest and services during the past seven years as a member of the Advisory Board of the Graduate

School of Journalism, Columbia University. The cartographers of the American press for their war maps.

- 1947 (Pulitzer centennial year.) Columbia University and the Graduate School of Journalism, for their efforts to maintain and advance the high standards governing the Pulitzer Prize awards. The *St. Louis Post-Dispatch*, for its unswerving adherence to the public and professional ideals of its founder and its leadership in the field of American journalism.

- 1948 DR. FRANK D. FACKENTHAL, for his interest and service.  
 1951 CYRUS L. SULZBERGER (*New York Times*) for his exclusive interview with Archbishop Stepinac in a Yugoslav prison.  
 1952 *Kansas City Star* for coverage of 1951 floods; MAX KASE (*New York Journal-American*) for exposures of bribery in college basketball.  
 1953 *New York Times* for its 17-year publication of "News of the Week in Review."

#### History of Services Rendered Public by American Press in Preceding Year

- 1918 MINNA LEWISON, HENRY B. HOUGH

#### Pulitzer Prizes in Letters

- Novel**  
 1918 *His Family*. By ERNEST POOLE  
 1919 *The Magnificent Ambersons*. By BOOTH TARKINGTON  
 1921 *The Age of Innocence*. By EDITH WHARTON  
 1922 *Alice Adams*. By BOOTH TARKINGTON  
 1923 *One of Ours*. By WILLA CATHER  
 1924 *The Able McLaughlins*. By MARGARET WILSON  
 1925 *So Big*. By EDNA FERBER  
 1926 *Arrowsmith*. By SINCLAIR LEWIS  
 1927 *Early Autumn*. By LOUIS BROMFIELD

- 1928 *The Bridge of San Luis Rey*. By THORNTON WILDER  
 1929 *Scarlet Sister Mary*. By JULIA PETERKIN  
 1930 *Laughing Boy*. By OLIVER LA FARGE  
 1931 *Years of Grace*. By MARGARET AYER BARNES  
 1932 *The Good Earth*. By PEARL S. BUCK  
 1933 *The Store*. By T. S. STRIBLING  
 1934 *Lamb in His Bosom*. By CAROLINE MILLER  
 1935 *Now in November*. By JOSEPHINE WINSLOW JOHNSON

- 1936 *Honey in the Horn*. By HAROLD L. DAVIS  
 1937 *Gone With the Wind*. By MARGARET MITCHELL  
 1938 *The Late George Apley*. By JOHN PHILLIPS MARQUAND  
 1939 *The Yearling*. By MARJORIE KINNAN RAWLINGS  
 1940 *The Grapes of Wrath*. By JOHN STEINBECK  
 1942 *In This Our Life*. By ELLEN GLASGOW  
 1943 *Dragon's Teeth*. By Upton SINCLAIR  
 1944 *Journey in the Dark*. By MARTIN FLAVIN  
 1945 *A Bell for Adano*. By JOHN HERSEY

- 1947 *All the King's Men*. By ROBERT PENN WARREN
- 1948 *Tales of the South Pacific*. By JAMES A. MICHENER
- 1949 *Guard of Honor*. By JAMES GOULD COZZENS
- 1950 *The Way West*. By A. B. GUTHRIE, JR.
- 1951 *The Town*. By CONRAD RICHTER
- 1952 *The Caine Mutiny*. By HERMAN WOUK
- 1953 *The Old Man and the Sea*. By ERNEST HEMINGWAY
- 1955 *A Fable*. By WILLIAM FAULKNER
- 1956 *Andersonville*. By MACKINLAY KANTOR
- Drama**
- 1918 *Why Marry?* By JESSE LYNCH WILLIAMS
- 1920 *Beyond the Horizon*. By EUGENE O'NEILL
- 1921 *Miss Lulu Bett*. By ZONA GALE
- 1922 *Anna Christie*. By EUGENE O'NEILL
- 1923 *Icebound*. By OWEN DAVIS
- 1924 *Hell-Bent Fer Heaven*. By HATCHER HUGHES
- 1925 *They Knew What They Wanted*. By SIDNEY HOWARD
- 1926 *Craig's Wife*. By GEORGE KELLY
- 1927 *In Abraham's Bosom*. By PAUL GREEN
- 1928 *Strange Interlude*. By EUGENE O'NEILL
- 1929 *Street Scene*. By ELMER L. RICE
- 1930 *The Green Pastures*. By MARC CONNELLY
- 1931 *Alison's House*. By SUSAN GLASPELL
- 1932 *Of Thee I Sing*. By GEORGE S. KAUFMAN, MORRIE RYSKIND & IRA GERSHWIN
- 1933 *Both Your Houses*. By MAXWELL ANDERSON
- 1934 *Men in White*. By SIDNEY KINGSLEY
- 1935 *The Old Maid*. By ZOE AKINS
- 1936 *Idiot's Delight*. By ROBERT E. SHERWOOD
- 1937 *You Can't Take It With You*. By MOSS HART and GEORGE S. KAUFMAN
- 1938 *Our Town*. By THORNTON WILDER
- 1939 *Abe Lincoln in Illinois*. By ROBERT E. SHERWOOD
- 1940 *The Time of Your Life*. By WILLIAM SAROYAN
- 1941 *There Shall Be No Night*. By ROBERT E. SHERWOOD
- 1943 *The Skin of Our Teeth*. By THORNTON WILDER
- 1945 *Harvey*. By MARY CHASE
- 1946 *State of the Union*. By RUSSELL CROUSE and HOWARD LINDSAY
- 1948 *A Streetcar Named Desire*. By TENNESSEE WILLIAMS
- 1949 *Death of a Salesman*. By ARTHUR MILLER
- 1950 *South Pacific*. By RICHARD RODGERS, OSCAR HAMMERSTEIN 2ND, AND JOSHUA LOGAN
- 1952 *The Shrike*. By JOSEPH KRAMM
- 1953 *Picnic*. By WILLIAM INGE
- 1954 *The Teahouse of the August Moon*. By JOHN PATRICK
- 1955 *Cat on a Hot Tin Roof*. By TENNESSEE WILLIAMS
- 1956 *The Diary of Anne Frank*. By FRANCES GOODRICH & ALBERT HACKETT
- United States History**
- 1917 *With Americans of Past and Present Days*. By J. J. JUSSERAND, Ambassador of France to U. S.
- 1918 *A History of the Civil War, 1861-1865*. By JAMES FORD RHODES
- 1920 *The War with Mexico*. By JUSTIN H. SMITH
- 1921 *The Victory at Sea*. By WILLIAM SOWDEN SIMS in collaboration with BURTON J. HENDRICK
- 1922 *The Founding of New England*. By JAMES TRUSLOW ADAMS
- 1923 *The Supreme Court in United States History*. By CHARLES WARREN
- 1924 *The American Revolution—A Constitutional Interpretation*. By CHARLES HOWARD MCILWAIN
- 1925 *A History of the American Frontier*. By FREDERIC L. PAXSON
- 1926 *The History of the United States*. By EDWARD CHANNING
- 1927 *Pinckney's Treaty*. By SAMUEL FLAGG BEMIS
- 1928 *Main Currents in American Thought*, 2 vols. By VERNON LOUIS PARINGTON
- 1929 *The Organization and Administration of the Union Army, 1861-1865*. By FRED ALBERT SHANNON
- 1930 *The War of Independence*. By CLAUDE H. VAN TYNE
- 1931 *The Coming of the War: 1914*. By BERNADOTTE E. SCHMITT
- 1932 *My Experiences in the World War*. By JOHN J. PERSHING
- 1933 *The Significance of Sections in American History*. By FREDERICK J. TURNER
- 1934 *The People's Choice*. By HERBERT AGAR
- 1935 *The Colonial Period of American History*. By CHARLES MCLEAN ANDREWS
- 1936 *The Constitutional History of the U. S.* By ANDREW C. McLAUGHLIN
- 1937 *The Flowering of New England*. By VAN WYCK BROOKS
- 1938 *The Road to Reunion, 1865-1900*. By PAUL HERMAN BUCK
- 1939 *A History of American Magazines*. By FRANK LUTHER MOTT
- 1940 *Abraham Lincoln: The War Years*. By CARL SANDBURG
- 1941 *The Atlantic Migration, 1607-1860*. By MARCUS LEE HANSEN
- 1942 *Reveille in Washington*. By MARGARET LEECH
- 1943 *Paul Revere and the World He Lived In*. By ESTHER FORBES
- 1944 *The Growth of American Thought*. By MERLE CURTI
- 1945 *Unfinished Business*. By STEPHEN BONSAL
- 1946 *The Age of Jackson*. By ARTHUR M. SCHLESINGER, JR.
- 1947 *Scientists Against Time*. By JAMES PHINNEY BAXTER, 3RD
- 1948 *Across the Wide Missouri*. By BERNARD DEVOTO
- 1949 *The Disruption of American Democracy*. By ROY FRANKLIN NICHOLS
- 1950 *Art and Life in America*. By OLIVER W. LARKIN
- 1951 *The Old Northwest, Pioneer Period 1815-1840*, Vols. I and II. By R. CARLYLE BULEY
- 1952 *The Uprooted*. By OSCAR HANDLIN
- 1953 *The Era of Good Feelings*. By GEORGE DAN-GERFIELD
- 1954 *A Stillness at Appomattox*. By BRUCE CATTONTON

- 1955 *Great River, the Rio Grande in North American History.* By PAUL HORGAN
- 1956 *The Age of Reform.* By RICHARD HOFSTADTER
- Biography**
- 1917 *Julia Ward Howe.* By LAURA E. RICHARDS and MAUDE HOWE ELLIOTT assisted by FLORENCE HOWE HALL
- 1918 *Benjamin Franklin, Self-Revealed.* By WILLIAM CABELL BRUCE
- 1919 *The Education of Henry Adams.* By HENRY ADAMS
- 1920 *The Life of John Marshall.* By ALBERT J. BEVERIDGE
- 1921 *The Americanization of Edward Bok.* By EDWARD BOK
- 1922 *A Daughter of the Middle Border.* By HAMLIN GARLAND
- 1923 *The Life and Letters of Walter H. Page.* By BURTON J. HENDRICK
- 1924 *From Immigrant to Inventor.* By MICHAEL IDVORSKY PUPIN
- 1925 *Barrett Wendell and His Letters.* By M. A. DE-WOLFE HOWE
- 1926 *The Life of Sir Wm. Osler.* By HARVEY CUSHING
- 1927 *Whitman.* By EMORY HOLLOWAY
- 1928 *The American Orchestra and Theodore Thomas.* By CHARLES EDWARD RUSSELL
- 1929 *The Training of an American. The Earlier Life and Letters of Walter H. Page.* By BURTON J. HENDRICK
- 1930 *The Raven.* By MARQUIS JAMES
- 1931 *Charles W. Eliot.* By HENRY JAMES
- 1932 *Theodore Roosevelt.* By HENRY F. PRINGLE
- 1933 *Grover Cleveland.* By ALLAN NEVINS
- 1934 *John Hay.* By TYLER DENNETT
- 1935 *R. E. Lee.* By DOUGLAS S. FREEMAN
- 1936 *The Thought and Character of William James.* By RALPH BARTON PERRY
- 1937 *Hamilton Fish.* By ALLAN NEVINS
- 1938 *Pedlar's Progress.* By ODELL SHEPARD. *Andrew Jackson.* By MARQUIS JAMES
- 1939 *Benjamin Franklin.* By CARL VAN DOREN
- 1940 *Woodrow Wilson. Life and Letters, Vols. VII and VIII.* By RAY STANNARD BAKER
- 1941 *Jonathan Edwards.* By OLA ELIZABETH WINSLOW
- 1942 *Crusader in Crinoline.* By FORREST WILSON
- 1943 *Admiral of the Ocean Sea.* By SAMUEL ELIOT MORISON
- 1944 *The American Leonardo: The Life of Samuel F. B. Morse.* By CARLTON MABEE
- 1945 *George Bancroft: Brahmin Rebel.* By RUSSEL BLAINE NYE
- 1946 *Son of the Wilderness.* By LINNIE MARSH WOLFE
- 1947 *The Autobiography of William Allen White*
- 1948 *Forgotten First Citizen: John Bigelow.* By MARGARET CLAPP
- 1949 *Roosevelt and Hopkins.* By ROBERT E. SHERWOOD
- 1950 *John Quincy Adams and the Foundations of American Foreign Policy.* By SAMUEL FLAGG BEMIS
- 1951 *John C. Calhoun: American Portrait.* By MARGARET LOUISE COIT
- 1952 *Charles Evans Hughes.* By MERLO J. PUSEY
- 1953 *Edmund Pendleton 1721-1803.* By DAVID J. MAYS
- 1954 *The Spirit of St. Louis.* By CHARLES A. LINDBERGH
- 1955 *The Taft Story.* By WILLIAM S. WHITE
- 1956 *Benjamin Henry Latrobe.* By TALBOT F. HAMLIN
- Poetry**
- 1918\* *Love Songs.* By SARA TEASDALE
- 1919\* *Old Road to Paradise.* By MARGARET WIDEMER
- Corn Huskers.* By CARL SANDBURG
- 1922 *Collected Poems.* By EDWIN ARLINGTON ROBINSON
- 1923 *The Ballad of the Harp-Weaver; A Few Figs from Thistles; eight sonnets in "American Poetry, 1922, A Miscellany.* By EDNA ST. VINCENT MILLAY
- 1924 *New Hampshire: A Poem with Notes and Grace Notes.* By ROBERT FROST
- 1925 *The Man Who Died Twice.* By EDWIN ARLINGTON ROBINSON
- 1926 *What's O'Clock.* By AMY LOWELL
- 1927 *Fiddler's Farewell.* By LEONORA SPEYER
- 1928 *Tristram.* By EDWIN ARLINGTON ROBINSON
- 1929 *John Brown's Body.* By STEPHEN VINCENT BENÉT
- 1930 *Selected Poems.* By CONRAD AIKEN
- 1931 *Collected Poems.* By ROBERT FROST
- 1932 *The Flowering Stone.* By GEORGE DILLON
- 1933 *Conquistador.* By ARCHIBALD MACLEISH
- 1934 *Collected Verse.* By ROBERT HILLIER
- 1935 *Bright Ambush.* By AUDREY WURDEMANN
- 1936 *Strange Holiness.* By ROBERT P. TRISTRAM COFFIN
- 1937 *A Further Range.* By ROBERT FROST
- 1938 *Cold Morning Sky.* By MARYA ZATURENSKA
- 1939 *Selected Poems.* By JOHN GOULD FLETCHER
- 1940 *Collected Poems.* By MARK VAN DOREN
- 1941 *Sunderland Capture.* By LEONARD BACON
- 1942 *The Dust Which Is God.* By WILLIAM ROSE BENÉT
- 1943 *A Witness Tree.* By ROBERT FROST
- 1944 *Western Star.* By STEPHEN VINCENT BENÉT
- 1945 *V-Letter and Other Poems.* By KARL SHAPIRO
- 1947 *Lord Weary's Castle.* By ROBERT LOWELL
- 1948 *The Age of Anxiety.* By W. H. AUDEN
- 1949 *Terror and Decorum.* By PETER VIERECK
- 1950 *Annie Allen.* By GWEN DOLYN BROOKS
- 1951 *Complete Poems.* By CARL SANDBURG
- 1952 *Collected Poems.* By MARIANNE MOORE
- 1953 *Collected Poems, 1917-52.* By ARCHIBALD MACLEISH
- 1954 *The Waking: Poems 1933-1953.* By THEODOR ROETHKE
- 1955 *Collected Poems.* By WALLACE STEVENS
- 1956 *Poems: North and South—A Cold Spring.* By ELIZABETH BISHOP

\* Previous to the establishment of this prize in 1922, the 1918 and 1919 awards were made from gifts provided by the Poetry Society.



Music		
1943	<i>Secular Cantata No. 2, A Free Song.</i> By WILLIAM SCHUMAN	1948 <i>Symphony No. 3.</i> By WALTER PISTON
1944	<i>Symphony No. 4 (Op. 34).</i> By HOWARD HANSON	1949 <i>Louisiana Story</i> music. By VIRGIL THOMSON
1945	<i>Appalachian Spring.</i> By AARON COPLAND	1950 <i>The Consul.</i> By GIAN-CARLO MENOTTI
1946	<i>The Canticle of the Sun.</i> By LEO SOWERBY	1951 <i>Music for opera Giants in the Earth.</i> By DOUGLAS STUART MOORE
1947	<i>Symphony No. 3.</i> By CHARLES IVES	1952 <i>Symphony Concertante.</i> By GAIL KUBICK
		1954 <i>Concerto for Two Pianos</i> and Orchestra. By QUINCY PORTER
		1955 <i>The Saint of Bleecker Street.</i> By GIAN-CARLO MENOTTI
		1956 <i>Symphony No. 3.</i> By ERNST TOCH
		Special Award
		1944 <i>Oklahoma!</i> By RICHARD RODGERS and OSCAR HAMMERSTEIN 2ND

## Overseas Press Club of America

### Awards, 1955

Best press reporting from abroad: Clifton Daniel, *New York Times*.  
 Best radio reporting from abroad: David Schoenbrun, CBS.  
 Best photographic reporting from abroad: Henri Cartier-Bresson, Magnum Photos.  
 Best television reporting of foreign affairs: Edward R. Murrow, CBS.  
 Best reporting originating in U. S. or U. N. on world affairs: John Daly, ABC.  
 Best magazine reporting of foreign events: Theodore H. White, *Collier's*.

<sup>1</sup> Cash award of \$500 in addition to Club plaque. <sup>2</sup> Gold medal in addition to Club plaque.

Best press interpretation of foreign affairs: Walter Lippmann, *New York Herald Tribune*.  
 Best radio interpretation of foreign affairs: Eric Sevareid, CBS.  
 George Polk Memorial Award, for best reporting requiring exceptional courage and enterprise abroad:<sup>1</sup> Gene Symonds, United Press Assns. (awarded posthumously).  
 Robert Capa Award, for superlative photography requiring exceptional courage and enterprise abroad:<sup>2</sup> Howard Sochurek, *Life*.

## List of Motion Picture Academy Awards

### PRODUCTION

### DIRECTOR AND MOVIE

Year	PRODUCTION	DIRECTOR AND MOVIE
1928	<i>Wings</i> , Paramount	Frank Borzage, <i>Seventh Heaven</i> ; Lewis Milestone, <i>Two Arabian Nights</i>
1929	<i>The Broadway Melody</i> , M-G-M	Frank Lloyd, <i>The Divine Lady</i>
1930	<i>All Quiet on the Western Front</i> , Universal	Lewis Milestone, <i>All Quiet on the Western Front</i>
1931	<i>Cimarron</i> , RKO Radio	Norman Taurog, <i>Skippy</i>
1932	<i>Grand Hotel</i> , M-G-M	Frank Borzage, <i>Bad Girl</i>
1933	<i>Cavalcade</i> , Fox	Frank Lloyd, <i>Cavalcade</i>
1934	<i>It Happened One Night</i> , Columbia	Frank Capra, <i>It Happened One Night</i>
1935	<i>Mutiny on the Bounty</i> , M-G-M	John Ford, <i>The Informer</i>
1936	<i>The Great Ziegfeld</i> , M-G-M	Frank Capra, <i>Mr. Deeds Goes to Town</i>
1937	<i>The Life of Emile Zola</i> , Warner	Leo McCarey, <i>The Awful Truth</i>
1938	<i>You Can't Take It With You</i> , Columbia	Frank Capra, <i>You Can't Take It With You</i>
1939	<i>Gone With the Wind</i> , Selznick-M-G-M	Victor Fleming, <i>Gone With the Wind</i>
1940	<i>Rebecca</i> , Selznick-UA	John Ford, <i>The Grapes of Wrath</i>
1941	<i>How Green Was My Valley</i> , 20th Century-Fox	John Ford, <i>How Green Was My Valley</i>
1942	<i>Mrs. Miniver</i> , M-G-M	William Wyler, <i>Mrs. Miniver</i>
1943	<i>Casablanca</i> , Warner Bros.	Michael Curtiz, <i>Casablanca</i>
1944	<i>Going My Way</i> , Paramount	Leo McCarey, <i>Going My Way</i>
1945	<i>The Lost Weekend</i> , Paramount	Billy Wilder, <i>The Lost Weekend</i>
1946	<i>The Best Years of Our Lives</i> , Goldwyn-RKO Radio	William Wyler, <i>The Best Years of Our Lives</i>
1947	<i>Gentleman's Agreement</i> , 20th Century-Fox	Elia Kazan, <i>Gentleman's Agreement</i>
1948	<i>Hamlet</i> , Rank-Two Cities-U-I	John Huston, <i>Treasure of Sierra Madre</i>
1949	<i>All the King's Men</i> , Rossen-Columbia	Joseph L. Mankiewicz, <i>A Letter to Three Wives</i>
1950	<i>All About Eve</i> , 20th Century-Fox	Joseph L. Mankiewicz, <i>All About Eve</i>
1951	<i>An American in Paris</i> , M-G-M	George Stevens, <i>A Place in the Sun</i>

- 1952 *The Greatest Show on Earth, Paramount*  
 1953 *From Here to Eternity, Columbia*  
 1954 *On the Waterfront, Columbia*  
 1955 *Marty, United Artists*

- John Ford, *The Quiet Man*  
 Fred Zinnemann, *From Here to Eternity*  
 Elia Kazan, *On the Waterfront*  
 Delbert Mann, *Marty*

## ACTRESS AND MOVIE

- 1928 Janet Gaynor, *Seventh Heaven, Street Angel, Sunrise*  
 1929 Mary Pickford, *Coquette*  
 1930 Norma Shearer, *The Divorcee*  
 1931 Marie Dressler, *Min and Bill*  
 1932 Helen Hayes, *The Sin of Madelon Claudet*  
 1933 Katharine Hepburn, *Morning Glory*  
 1934 Claudette Colbert, *It Happened One Night*  
 1935 Bette Davis, *Dangerous*  
 1936 Luise Rainer, *The Great Ziegfeld*  
 1937 Luise Rainer, *The Good Earth*  
 1938 Bette Davis, *Jezebel*  
 1939 Vivien Leigh, *Gone With the Wind*  
 1940 Ginger Rogers, *Kitty Foyle*  
 1941 Joan Fontaine, *Suspicion*  
 1942 Greer Garson, *Mrs. Miniver*  
 1943 Jennifer Jones, *The Song of Bernadette*  
 1944 Ingrid Bergman, *Gaslight*  
 1945 Joan Crawford, *Mildred Pierce*  
 1946 Olivia de Havilland, *To Each His Own*  
 1947 Loretta Young, *Farmer's Daughter*  
 1948 Jane Wyman, *Johnny Belinda*  
 1949 Olivia de Havilland, *The Heiress*  
 1950 Judy Holliday, *Born Yesterday*  
 1951 Vivien Leigh, *A Streetcar Named Desire*  
 1952 Shirley Booth, *Come Back, Little Sheba*  
 1953 Audrey Hepburn, *Roman Holiday*  
 1954 Grace Kelly, *Country Girl*  
 1955 Anna Magnani, *The Rose Tattoo*

## ACTRESS (SUPPORTING ROLE)

- 1936 Gale Sondergaard, *Anthony Adverse*  
 1937 Alice Brady, *In Old Chicago*  
 1938 Fay Bainter, *Jezebel*  
 1939 Hattie McDaniel, *Gone With the Wind*  
 1940 Jane Darwell, *The Grapes of Wrath*  
 1941 Mary Astor, *The Great Lie*  
 1942 Teresa Wright, *Mrs. Miniver*  
 1943 Katina Paxinou, *For Whom the Bell Tolls*  
 1944 Ethel Barrymore, *None But the Lonely Heart*  
 1945 Anne Revere, *National Velvet*  
 1946 Anne Baxter, *The Razor's Edge*  
 1947 Celeste Holm, *Gentleman's Agreement*  
 1948 Claire Trevor, *Key Largo*  
 1949 Mercedes McCambridge, *All the King's Men*  
 1950 Josephine Hull, *Harvey*  
 1951 Kim Hunter, *A Streetcar Named Desire*  
 1952 Gloria Grahame, *The Bad and the Beautiful*  
 1953 Donna Reed, *From Here to Eternity*  
 1954 Eva Marie Saint, *On the Waterfront*  
 1955 Jo Van Fleet, *East of Eden*

## ACTOR AND MOVIE

- Emil Jannings, *The Way of All Flesh, The Last Command*  
 Warner Baxter, *In Old Arizona*  
 George Arliss, *Disraeli*  
 Lionel Barrymore, *A Free Soul*  
 Fredric March, *Dr. Jekyll and Mr. Hyde*  
 Charles Laughton, *Henry VIII*  
 Clark Gable, *It Happened One Night*  
 Victor McLaglen, *The Informer*  
 Paul Muni, *The Story of Louis Pasteur*  
 Spencer Tracy, *Captains Courageous*  
 Spencer Tracy, *Boys Town*  
 Robert Donat, *Goodbye, Mr. Chips*  
 James Stewart, *The Philadelphia Story*  
 Gary Cooper, *Sergeant York*  
 James Cagney, *Yankee Doodle Dandy*  
 Paul Lukas, *Watch on the Rhine*  
 Bing Crosby, *Going My Way*  
 Ray Milland, *The Lost Weekend*  
 Fredric March, *The Best Years of Our Lives*  
 Ronald Colman, *A Double Life*  
 Sir Laurence Olivier, *Hamlet*  
 Broderick Crawford, *All the King's Men*  
 Jose Ferrer, *Cyrano de Bergerac*  
 Humphrey Bogart, *The African Queen*  
 Gary Cooper, *High Noon*  
 William Holden, *Stalag 17*  
 Marlon Brando, *On the Waterfront*  
 Ernest Borgnine, *Marty*

## ACTOR (SUPPORTING ROLE)

- Walter Brennan, *Come and Get It*  
 Joseph Schildkraut, *The Life of Emile Zola*  
 Walter Brennan, *Kentucky*  
 Thomas Mitchell, *Stagecoach*  
 Walter Brennan, *The Westerner*  
 Donald Crisp, *How Green Was My Valley*  
 Van Heflin, *Johnny Eager*  
 Charles Coburn, *The More the Merrier*  
 Barry Fitzgerald, *Going My Way*  
 James Dunn, *A Tree Grows in Brooklyn*  
 Harold Russell, *The Best Years of Our Lives*  
 Edmund Gwenn, *Miracle on 34th Street*  
 Walter Huston, *The Treasure of Sierra Madre*  
 Dean Jagger, *Twelve O'Clock High*  
 George Sanders, *All About Eve*  
 Karl Malden, *A Streetcar Named Desire*  
 Anthony Quinn, *Viva Zapata!*  
 Frank Sinatra, *From Here to Eternity*  
 Edmund O'Brien, *The Barefoot Contessa*  
 Jack Lemmon, *Mr. Roberts*

## Other Academy Awards for 1955

**Art direction (black and white):** Hal Pereira and Tambl Laren, *The Rose Tattoo*.

**Art direction (color):** William Flannery and Jo Mielziner, *Picnic*.

**Cinematography (black and white):** James Wong Howe, *The Rose Tattoo*.

**Cinematography (color):** Robert Burks, *To Catch a Thief*.

**Costume design (black and white):** Helen Rose, *I'll Cry Tomorrow*.

**Costume design (color):** Charles LeMaire, *Love Is a Many-Splendored Thing*.

**Documentary (feature):** Helen Keller in *Her Story*, Nancy Hamilton, producer.

**Documentary (short subject):** *Men Against the Arctic*, Walt Disney.

**Film editing:** Charles Nelson and William A. Lyon, *Picnic*.

**Foreign-language film:** *Samurai* (Japanese).

**Music (score of drama or comedy):** Alfred Newman, *Love Is a Many-Splendored Thing*.

**Music (score of musical picture):** Robert Russell Bennett, Jay Blackton and Adolph Deutsch, *Oklahoma!*

**Music (song):** "Love Is a Many-Splendored Thing," Sammy Fain and Paul Francis Webster.

**Scientific or technical awards (Class I, Academy Statuette):** National Carbon Co. For high efficiency yellow flame carbon for color photography.

**Set decoration (black and white):** Sam Comer and Arthur Krams, *The Rose Tattoo*.

**Set decoration (color):** Robert Priestley, *Picnic*.

**Short subject (cartoon):** *Speedy Gonzales*.

**Short subject (1-reel):** *Survival City*.

**Short subject (2-reel):** *The Face of Lincoln*, University of Southern California.

**Sound recording:** Todd-AO Sound Department, *Oklahoma!*

**Special effects:** *The Bridges at Toko-Ri*, Perlberg-Seaton, Paramount.

**Writing (original story):** Daniel Fuchs, *Love Me or Leave Me*.

**Writing (screenplay):** Paddy Chayefsky, *Marty*.

**Writing (story and screenplay):** William Ludwig and Sonya Levien, *Interrupted Melody*.

## New York Film Critics' Awards

1—best motion picture; 2—best male performance; 3—best feminine performance; 4—best direction; 5—best foreign film; 6—special award.)

- |  |   |   |
|--|---|---|
| <p>1940 1. <i>The Grapes of Wrath</i>, 20th Century-Fox</p> <p>2. Charles Chaplin, <i>The Great Dictator</i> (refused award)</p> <p>3. Katharine Hepburn, <i>The Philadelphia Story</i></p> <p>4. John Ford, <i>The Grapes of Wrath</i></p> <p>5. <i>The Baker's Wife</i> (French)</p> | <p>3. Ida Lupino, <i>The Hard Way</i></p> <p>4. George Stevens, <i>The More the Merrier</i></p>   | <p style="text-align: center;">Best Years of Our Lives</p> <p>5. <i>Open City</i> (Italian)</p>   |
| <p>1941 1. <i>Citizen Kane</i>, RKO-Mercury</p> <p>2. Gary Cooper, <i>Sergeant York</i></p> <p>3. Joan Fontaine, <i>Suspicion</i></p> <p>4. John Ford, <i>How Green Was My Valley</i></p>  | <p>1944 1. <i>Going My Way</i>, Paramount</p> <p>2. Barry Fitzgerald, <i>Going My Way</i></p> <p>3. Tallulah Bankhead, <i>Lifeboat</i></p> <p>4. Leo McCarey, <i>Going My Way</i></p>   | <p>1947 1. <i>Gentleman's Agreement</i>, 20th Century-Fox</p> <p>2. William Powell, <i>Life With Father</i></p> <p>3. Deborah Kerr, <i>The Adventuress and Black Narcissus</i></p> <p>4. Elia Kazan, <i>Gentleman's Agreement and Boomerang</i></p> <p>5. <i>To Live in Peace</i> (Italian)</p> |
| <p>1942 1. <i>In Which We Serve</i>, UA-Noel Coward</p> <p>2. James Cagney, <i>Yankee Doodle Dandy</i></p> <p>3. Agnes Moorehead, <i>The Magnificent Ambersons</i></p> <p>4. John Farrow, <i>Wake Island</i></p>   | <p>1945 1. <i>The Lost Weekend</i>, Paramount</p> <p>2. Ray Milland, <i>The Lost Weekend</i></p> <p>3. Ingrid Bergman, <i>Spellbound</i> and <i>The Bells of St. Mary's</i></p> <p>4. Billy Wilder, <i>The Lost Weekend</i></p> <p>5. (None)</p> <p>6. <i>The True Glory</i> and <i>The Fighting Lady</i></p> | <p>1948 1. <i>Treasure of Sierra Madre</i>, Warner Bros.</p> <p>2. Sir Laurence Olivier, <i>Hamlet</i></p> <p>3. Olivia de Havilland, <i>The Snake Pit</i></p> <p>4. John Huston, <i>Treasure of Sierra Madre</i></p> <p>5. <i>Paisan</i> (Italian)</p>   |
| <p>1943 1. <i>Watch on the Rhine</i>, Warner Bros.</p> <p>2. Paul Lukas, <i>Watch on the Rhine</i></p>   | <p>1946 1. <i>The Best Years of Our Lives</i>, Goldwyn-RKO</p> <p>2. Laurence Olivier, <i>Henry V</i></p> <p>3. Celia Johnson, <i>Brief Encounter</i></p> <p>4. William Wyler, <i>The</i></p>   | <p>1949 1. <i>All the King's Men</i>, Rossen-Columbia</p> <p>2. Broderick Crawford, <i>All the King's Men</i></p> <p>3. Olivia de Havilland, <i>The Heiress</i></p> <p>4. Carol Reed, <i>The Fallen Idol</i></p>  |



5. *The Bicycle Thief* (Italian) 1952 1. *High Noon*, United Artists  
 1950 1. *All About Eve*, 20th Century-Fox 2. Ralph Richardson, *Breaking the Sound Barrier*  
 2. Gregory Peck, *Twelve O'Clock High* 3. Shirley Booth, *Come Back, Little Sheba*  
 3. Bette Davis, *All About Eve* 4. Fred Zinnemann, *High Noon*  
 4. Joseph L. Mankiewicz, *All About Eve* 5. *Forbidden Games* (French)  
 5. *Ways of Love* (Franco-Italian) 1953 1. *From Here to Eternity*, Columbia  
 1951 1. *A Streetcar Named Desire*, Warner Bros. 2. Burt Lancaster, *From Here to Eternity*  
 2. Arthur Kennedy, *Bright Victory* 3. Audrey Hepburn, *Roman Holiday*  
 3. Vivien Leigh, *A Streetcar Named Desire* 4. Fred Zinnemann, *From Here to Eternity*  
 4. Ella Kazan, *A Streetcar Named Desire* 5. *Justice Is Done* (French)  
 5. *Miracle in Milan* (Italian) 6. *A Queen Is Crowned* (JARO) and *The Conquest of Everest* (JARO)
- 1954 1. *On the Waterfront*, Columbia  
 2. Marlon Brando, *On the Waterfront*  
 3. Grace Kelly, *The Country Girl*, Rear Window, *Dial M for Murder*  
 4. Ella Kazan, *On the Waterfront*  
 5. *Gate of Hell* (Japan-ese)
- 1955 1. *Marty*, United Artists  
 2. Ernest Borgnine, *Marty*  
 3. Anna Magnani, *The Rose Tattoo*  
 4. David Lean, *Summer-time*  
 5. *Diabolique* (French) and *Umberto D.* (Italian)

## New York Drama Critics' Circle Awards

- 1935-36 *Winterset*, by Maxwell Anderson  
 1936-37 *High Tor*, by Maxwell Anderson  
 1937-38 *Of Mice and Men*, by John Steinbeck  
*Shadow and Substance*, by Paul Vincent Carroll<sup>1</sup>  
 1938-39 (No award)  
*The White Steed*, by Paul Vincent Carroll<sup>1</sup>  
 1939-40 *The Time of Your Life*, by William Saroyan  
 1940-41 *Watch on the Rhine*, by Lillian Hellman  
*The Corn Is Green*, by Emlyn Williams<sup>1</sup>  
 1941-42 (No award)  
*Blithe Spirit*, by Noel Coward<sup>1</sup>  
 1942-43 *The Patriots*, by Sidney Kingsley  
 1943-44 (No award)  
*Jacobowsky and the Colonel*, by Franz Werfel-S. N. Behrman<sup>1</sup>  
 1944-45 *The Glass Menagerie*, by Tennessee Williams  
 1945-46 (No award)  
*Carousel*, by Richard Rodgers & Oscar Hammerstein II<sup>2</sup>  
 1946-47 *All My Sons*, by Arthur Miller  
*No Exit*, by Jean-Paul Sartre<sup>1</sup>  
*Brigadoon*, by Lerner and Loewe<sup>2</sup>  
 1947-48 *A Streetcar Named Desire*, by Tennessee Williams  
*The Winslow Boy*, by Terence Rattigan<sup>1</sup>  
 1948-49 *Death of a Salesman*, by Arthur Miller  
*The Madwoman of Chaillot*, by Jean Giraudoux - Maurice Valency<sup>1</sup>  
*South Pacific*, by Richard Rodgers, Oscar Hammerstein II & Joshua Logan<sup>2</sup>  
 1949-50 *The Member of the Wedding*, by Carson McCullers  
*The Cocktail Party*, by T. S. Eliot<sup>1</sup>  
*The Consul*, by Gian-Carlo Menotti<sup>1a</sup>  
 1950-51 *Darkness at Noon*, by Sidney Kingsley<sup>3</sup>  
*The Lady's Not for Burning*, by Christopher Fry<sup>1</sup>  
*Guys and Dolls*, by Abe Burrows, Jo Swerling & Frank Loesser<sup>2</sup>  
 1951-52 *I Am a Camera*, by John Van Druten<sup>4</sup>  
*Venus Observed*, by Christopher Fry<sup>1</sup>  
*Pal Joey*, by Richard Rodgers, Lorenz Hart & John O'Hara<sup>2</sup>  
*Don Juan in Hell*, by George B. Shaw<sup>5</sup>  
 1952-53 *Picnic*, by William Inge  
*The Love of Four Colonels*, by Peter Ustinov<sup>1</sup>  
*Wonderful Town*, by Joseph Fields, Jerome Chodorov, Betty Comden, Adolph Green & Leonard Bernstein<sup>2</sup>  
 1953-54 *The Teahouse of the August Moon*, by John Patrick  
*On dine*, by Jean Giraudoux<sup>1</sup>  
*The Golden Apple*, by John Latouche & Jerome Moross<sup>2</sup>  
 1954-55 *Cat on a Hot Tin Roof*, by Tennessee Williams  
*Witness for the Prosecution*, by Agatha Christie<sup>1</sup>  
*The Saint of Bleecker Street*, by Gian-Carlo Menotti<sup>1a</sup>  
 1955-56 *The Diary of Anne Frank*, by Frances Goodrich & Albert Hackett  
*Tiger at the Gates*, by Jean Giraudoux-Christopher Fry<sup>1</sup>  
*My Fair Lady*, by Frederick Loewe & Alan Jay Lerner<sup>2</sup>

<sup>1</sup> Citation for best foreign play. <sup>2</sup> Citation for best musical. <sup>3</sup> Based on a novel by Arthur Koestler. <sup>4</sup> Based on Christopher Isherwood's *Berlin Stories*. <sup>5</sup> For "distinguished and original contribution to the theater."

## The Hall of Fame

The Hall of Fame for Great Americans, established in 1900 on the campus of New York University, is an open-air colonnade with busts and tablets for 82 of the 86 persons so far honored for national achievements. New names are voted on every five years by a College of Electors of approximately 100 men and women from all the states. To be elected to the Hall of Fame, an individual must have been dead more than 25 years (before 1922, the stipulation was 10 years), must have been a citizen of the U. S., and must receive a majority vote. Nominations may be made by any citizen. The next election will be held in 1960.

Names	Elected	Names	Elected
John Adams (statesman)	1900	James Kent (jurist)	1900
John Quincy Adams (statesman)	1905	Sidney Lanier (poet)	1945
Louis Agassiz (naturalist)	1915	Robert E. Lee (military officer)	1900
Susan B. Anthony (reformer)	1950	Abraham Lincoln (statesman)	1900
John James Audubon (naturalist)	1900	Henry W. Longfellow (poet)	1900
George Bancroft (historian)	1910	James Russell Lowell (poet)	1905
Henry Ward Beecher (clergyman)	1900	Mary Lyon (educator)	1905
Alexander Graham Bell (inventor)	1950	James Madison (statesman)	1905
Daniel Boone (explorer)	1915	Horace Mann (educator)	1900
Edwin Booth (actor)	1925	John Marshall (jurist)	1900
Phillips Brooks (clergyman)	1910	Matthew F. Maury (oceanographer)	1930
William Cullen Bryant (poet)	1910	Maria Mitchell (astronomer)	1905
William Ellery Channing (clergyman)	1900	James Monroe (statesman)	1930
Rufus Choate (lawyer)	1915	Samuel F. B. Morse (inventor)	1900
Henry Clay (statesman)	1900	William T. G. Morton (dentist)	1920
Samuel L. Clemens (author)	1920	John Lothrop Motley (historian)	1910
Grover Cleveland (statesman)	1935	Simon Newcomb (astronomer)	1935
James Fenimore Cooper (author)	1910	Thomas Paine (author)	1945
Peter Cooper (philanthropist)	1900	Alice Freeman Palmer (educator)	1920
Charlotte S. Cushman (actress)	1915	Francis Parkman (historian)	1915
James Buchanan Eads (engineer)	1920	George Peabody (philanthropist)	1900
Jonathan Edwards (clergyman)	1900	William Penn (colonizer)	1935
Ralph Waldo Emerson (author)	1900	Edgar Allan Poe (author)	1910
David G. Farragut (naval officer)	1900	Walter Reed (surgeon)	1945
Stephen C. Foster (song composer)	1940	Theodore Roosevelt (statesman)	1950
Benjamin Franklin (statesman)	1900	Augustus Saint-Gaudens (sculptor)	1920
Robert Fulton (inventor)	1900	William T. Sherman (army officer)	1905
Josiah Willard Gibbs* (physicist)	1950	Joseph Story (jurist)	1900
William Crawford Gorgas (physician)	1950	Harriet Beecher Stowe (author)	1910
Ulysses S. Grant (statesman)	1900	Gilbert Charles Stuart (painter)	1900
Asa Gray (botanist)	1900	Booker T. Washington (educator)	1945
Alexander Hamilton (statesman)	1915	George Washington (statesman)	1900
Nathaniel Hawthorne (author)	1900	Daniel Webster (statesman)	1900
Joseph Henry (physicist)	1915	George Westinghouse* (inventor)	1955
Patrick Henry (statesman)	1920	J. A. McNeill Whistler (painter)	1930
Oliver Wendell Holmes (author)	1910	Walt Whitman (poet)	1930
Mark Hopkins (educator)	1915	Eli Whitney (inventor)	1900
Elias Howe (inventor)	1915	John Greenleaf Whittier (poet)	1905
Washington Irving (author)	1900	Emma Willard (educator)	1905
Andrew Jackson (statesman)	1910	Frances Elizabeth Willard (reformer)	1910
Thomas ("Stonewall") Jackson*		Roger Williams (clergyman)	1920
(military officer)	1955	Woodrow Wilson (statesman)	1950
Thomas Jefferson (statesman)	1900	Wilbur Wright* (inventor)	1955
John Paul Jones (naval officer)	1925		

\* Not yet represented by a bust and tablet.

# AVIATION



## Famous Firsts in Aviation

**T**HOUGH man succeeded in making powered flight only a half century ago, his dreams of flying go back to mythology.

The principle of jet propulsion, for example, was understood and put into design form some 2,000 years ago by Hero, an Alexandrian philosopher. And as far back as A.D. 1232 Genghis Khan's son, Ogdai, used rockets as a "secret weapon" in an attack on the Tartar city of Kaifeng. In 1480, Leonardo da Vinci drew sketches for what we now call helicopters.

Man's first aeronautical successes came in balloons.

**1782—First balloon flight.** Jacques and Joseph Montgolfier of Annonay, Fr., sent up a small smoke-filled balloon about mid-November.

**1783—First hydrogen-filled balloon flight.** Jacques A. C. Charles, Paris physicist, supervised construction by A. J. and M. N. Robert of a 13-ft. diameter balloon which was filled with hydrogen. It got up to about 3,000 ft. and traveled about 16 mi. in a 45-min. flight (Aug. 27).

**1783—First human balloon flights.** A Frenchman, Jean Pilâtre de Rozier, made the first captive balloon ascension (Oct. 15). With the Marquis d'Arlandes, Pilâtre de Rozier made the first free flight, reaching a peak altitude of about 500 ft., and traveling about  $5\frac{1}{2}$  mi. in 20 min. (Nov. 21).

**1784—First powered balloon.** Gen. Jean Baptiste Marie Meusnier developed the first propeller-driven and elliptically-shaped balloon—the crew cranking three propellers on a common shaft to give the craft a speed of about 3 mi. per hr.

**1784—First woman to fly.** Mme. Thible, a French opera singer (June 4).

**1793—First balloon flight in America.** Jean Pierre Blanchard, a French pilot, made it from Philadelphia to near Woodbury, Gloucester Co., N. J., in a little over 45 min. (Jan. 9).

**1794—First military use of the balloon.** Jean Marie Coutelle, using a balloon built for the French Army, made two 4 hr. observation ascents. The military value of the ascents seems to have been in damage to the enemy's morale.

**1797—First parachute jump.** André-Jacques Garnerin dropped from about 6,500 ft. over Monceau Park in Paris in a 23-ft. diameter 'chute made of white canvas with a basket attached (Oct. 22).

**1843—First air transport company.** In London, William S. Henson and John Stringfellow filed articles of incorporation for the Aerial Transit Company (Mar. 24). It failed.

**1852—First dirigible.** Henri Giffard, a French engineer, flew in a controllable (more or less) steam engine-powered balloon, 144 ft. long and 39 ft. in diameter, inflated with 88,000 cu. ft. of coal gas. It reached 6.7 mi. per hr. on a flight from Paris to Trappe (Sept. 24).

**1860—First aerial photographers.** Samuel Archer King and William Black made two photos of Boston, still in existence.

**1872—First gas-engine powered dirigible.** Paul Haeublein, a German engineer, flew in a semi-rigid frame dirigible, powered by a 4-cylinder internal combustion engine running on coal gas drawn from the supporting bag.

**1873—First transatlantic attempt.** *The New York Daily Graphic* sponsored the attempt with a 400,000 cu. ft. balloon carrying a lifeboat. A rip in the bag during inflation brought collapse of the balloon and the project.

**1897—First successful metal dirigible.** An all-metal dirigible, designed by David Schwarz, a Hungarian, took off from Berlin's Tempelhof Field and, powered by a 16-hp. Daimler engine, got several miles before leaking gas caused it to crash (Nov. 13).

**1900—First Zeppelin flight.** Germany's Count Ferdinand von Zeppelin flew the first of his long series of rigid-frame airships. It attained a speed of 18 mi. per hr. and got  $3\frac{1}{2}$  mi. before its steering gear failed (July 2).

**1903—First successful heavier-than-air machine flight.** Aviation was really born on the sand dunes at Kitty Hawk, N. C., when Orville Wright crawled to his prone position between the wings of the biplane he and his brother Wilbur had built, opened the throttle of their home-made 12-hp. engine and took to the air. He covered 120 ft. in 12 sec. Later that day, in one of four flights, Wilbur stayed up 59 sec. and covered 852 ft. (Dec. 17).

**1904—First airplane maneuvers.** Orville Wright made the first turn with an airplane (Sept. 15); 5 days later his brother Wilbur made the first complete circle.

**1905—First airplane flight over half an hour.** Orville Wright kept his craft up 33 min. 17 sec. (Oct. 4).



- 1906—First European airplane flight. Alberto Santos-Dumont, a Brazilian, flew a heavier-than-air machine at Bagatelle Field, Paris (Sept. 13).
- 1908—First airplane fatality. Lt. Thomas E. Selfridge, U. S. Army Signal Corps, was in a group of officers evaluating the Wright plane at Fort Myer, Va. He was up about 75 ft. with Orville Wright when the propeller hit a bracing wire and was broken, throwing the plane out of control, killing Selfridge and seriously injuring Wright (Sept. 17).
- 1910—First licensed woman pilot. Baroness Raymonde de la Roche of France, who learned to fly in 1909, received ticket No. 36 on March 8.
- 1910—First flight from shipboard. Eugene Ely took a Curtiss plane off from the deck of cruiser *Birmingham* at Hampton Roads, Va., and flew to Norfolk (Nov. 14). The following January he reversed the process, flying from Camp Selfridge to the deck of the battleship *Pennsylvania* in San Francisco Bay (Jan. 18).
- 1911—First U. S. woman pilot. Harriet Quimby, a magazine writer, who got ticket No. 37.
- 1913—First multi-engined aircraft. Built and flown by Igor Ivan Sikorsky while still in his native Russia.
- 1914—First aerial combat. In August, Allied and German pilots and observers started shooting at each other with pistols and rifles—with negligible results.
- 1915—First air raids on England. German Zeppelins started dropping bombs on four English communities (Jan. 19).
- 1918—First U. S. air squadron. The U. S. Army Air Corps made its first independent raids over enemy lines, in DH-4 planes (British-designed) powered with 400-hp. American-designed Liberty engines (Apr. 8).
- 1918—First regular airmail service. Operated for the Post Office Department by the Army, the first regular service was inaugurated with one round trip a day (except Sunday) between Washington, D. C., and New York City (May 15).
- 1919—First transatlantic flight. The NC-4, one of four Curtiss flying boats commanded by Lt. Comdr. Albert C. Read, reached Lisbon, Port. (May 27) after hops from Trepassy Bay, Nfd. to Horta, Azores (May 18-17), to Ponta Delgada (May 20). The Liberty-powered craft was piloted by Walter Hinton.
- 1919—First nonstop transatlantic flight. Capt. John Alcock and Lt. Arthur Whitten Brown, British World War I flyers, made the 1,900 mi. from St. John's, Nfd. to Clifden, Ire., in 16 hr. 12 min. in a Vickers-Vimy bomber with two 350-hp. Rolls-Royce engines (June 15-16).
- 1919—First lighter-than-air transatlantic flight. The British dirigible R-34, commanded by Maj. George H. Scott, left Firth of Forth, Scot. (July 2) and touched down at Mineola, L. I., 108 hr. later. The eastbound trip was made in 75 hr. (completed July 13).
- 1919—First scheduled passenger service (using airplanes). Aircraft Travel and Transport inaugurated London-Paris service (Aug. 25). Later the company started the first trans-channel mail service on the same route (Nov. 10).
- 1921—First naval vessel sunk by aircraft. Two battleships being scrapped by treaty were sunk by bombs dropped from Army planes in demonstration put on by Brig. Gen. William S. Mitchell (July 21).
- 1921—First helium balloon. The C-7, non-rigid Navy dirigible was first to use non-inflammable helium as lifting gas, making a flight from Hampton Roads, Va., to Washington, D. C. (Dec. 1).
- 1922—First member of Caterpillar Club. Lt. (later Maj. Gen.) Harold Harris bailed out of a crippled plane he was testing at McCook Field, Dayton, Ohio (Oct. 20), and became the first man to join the Caterpillar Club—those whose lives have been saved by parachute.
- 1923—First nonstop transcontinental flight. Lts. John A. Macready and Oakley Kelly flew a single-engine Fokker T-2 nonstop from New York to San Diego, a distance of just over 2,500 mi. in 26 hr. 50 min. (May 2-3).
- 1923—First autogyro flights. Juan de la Cierva, brilliant Spanish mathematician, made the first successful flight in a rotary wing aircraft in Madrid (June 9).
- 1924—First round-the-world flight. Four Douglas Cruiser biplanes of the U. S. Army Air Corps took off from Seattle under command of Maj. Frederick Martin (Apr. 6). 175 days later two of the planes (Lt. Lowell Smith's and Lt. Erik Nelson's) landed in Seattle after a circuitous route—one source saying 26,345 mi., another saying 27,553 mi.
- 1926—First polar flight. Then-Lt. Cmdr. Richard E. Byrd, acting as navigator, and Floyd Bennett as pilot, flew a trimotor Fokker from Kings Bay, Spitsbergen, over the North Pole and back in 15½-hr. flight (May 8-9).
- 1927—First solo transatlantic flight. Charles Augustus Lindbergh lifted his Wright-powered Ryan monoplane, *Spirit of St. Louis*, from Roosevelt Field, L. I., to stay aloft 33 hr. 39 min. and cover 3,600 mi. to Le Bourget Field outside Paris (May 20-21).
- 1927—First transatlantic passenger. Charles A. Levine was piloted by Clarence D. Chamberlin from Roosevelt Field, L. I., to Elsleben, Ger., in a Wright-powered Bellanca (June 4-5).

- 1928—First east-west transatlantic crossing. Baron Guenther von Huenefeld, piloted by German Capt. Hermann Koehl and Irish Capt. James Fitzmaurice, left Dublin for New York City (Apr. 12) in a single-engine all-metal Junkers monoplane. Some 37 hr. later they cracked up on Greenly Island, Labrador. Rescued.
- 1928—First U. S.-Australia flight. Sir Charles Kingsford-Smith and Capt. Charles T. P. Ulm, Australians, and two American navigators, Harry W. Lyon and James Warner, crossed the Pacific from Oakland to Brisbane. They went via Hawaii and the Fiji Islands in a trimotor Fokker (May 31-June 8).
- 1928—First trans-Arctic flight. Sir Hubert Wilkins, Australian explorer, piloted by Carl Ben Eielson, flew from Point Barrow, Alaska, to Spitsbergen (mid-April).
- 1929—First of the endurance records. With Air Corps Maj. Carl Spaatz in command and Capt. Ira Eaker as chief pilot, an Army Fokker, aided by refueling in the air, remained aloft 150 hr. 40 min. at Los Angeles (Jan. 1-7).
- 1929—First blind flight. James H. Doolittle proved the feasibility of instrument flying when he took off and landed entirely on instruments (Sept. 24).
- 1929—First rocket engine flight. Fritz von Opel, German auto maker, stayed aloft in his small rocket-powered craft for 75 sec., covering nearly 2 mi. (Sept. 30).
- 1929—First South Pole flight. Comdr. Richard E. Byrd, with Bernt Balchen as pilot, Harold I. June, radio operator, and Capt. A. C. McKinley, photographer, flew a trimotor Fokker from the Bay of Whales, Little America, over the South Pole and back (Nov. 28-29).
- 1930—First Paris-New York nonstop flight. Dieudonné Coste and Maurice Bellonte, French pilots, flew a Hispano-powered Breguet biplane from Le Bourget Field to Valley Stream, L. I., in 37 hr. 18 min. (Sept. 2-3).
- 1931—First flight into the stratosphere. Prof. Auguste Piccard, Swiss physicist, and Charles Knipfer, ascended in a balloon from Augsburg, Ger., and reached a height of 51,793 ft. in a 17-hr. flight that terminated on a glacier near Innsbruck, Austria (May 27).
- 1931—First nonstop transpacific flight. Hugh Herndon and Clyde Pangborn took off from Sabishiro Beach, Japan, dropped their landing gear and flew 4,860 mi. to near Wenatchee, Wash., in 41 hr. 13 min. (Oct. 4-5).
- 1932—First woman's transatlantic solo. Amelia Earhart, flying a Pratt & Whitney Wasp-powered Lockheed Vega, flew alone from Harbor Grace, Nfld., to Ireland in approximately 15 hr. (May 20-21).
- 1932—First westbound transatlantic solo. James A. Mollison, British pilot, took a de Havilland Puss Moth from Portmarnock, Ire., to Pennfield, N. B. (Aug. 18).
- 1932—First woman airline pilot. Ruth Rowland Nichols, first woman to hold three international records at the same time—speed, distance, altitude—was employed by N. Y.-New England Airways.
- 1933—First round-the-world solo. Wiley Post took a Lockheed Vega, *Winnie Mae*, 15,596 mi. around the world in 7 days 18 hr. 49½ min. (July 15-22).
- 1937—First successful helicopter. Hanna Reitsch, German woman pilot, flew Dr. Heinrich Focke's FW-61 in free, fully-controlled flight at Bremen (July 4).
- 1939—First turbojet flight. Just before their invasion of Poland, the Germans flew a Heinkel He-178 plane powered by a Heinkel S3B turbojet (Aug. 27).
- 1942—First American jet plane flight. Robert Stanley, chief pilot for Bell Aircraft Corp., flew the Bell XP-59 *Airacomet* at Muroc Army Base, Calif. (Oct. 1).
- 1947—First piloted supersonic flight in an airplane. Capt. Charles E. Yeager, U. S. Air Force, flew the X-1, rocket-powered research plane built by Bell Aircraft Corp., faster than the speed of sound at Muroc Air Force Base, Calif. (Oct. 14).
- 1949—First round-the-world nonstop flight. Capt. James Gallagher and USAF crew of 13 flew a Boeing B-50A Superfortress around the world nonstop from Ft. Worth, Tex., returning to same point 23,452 mi. in 94 hr. 1 min., with 4 aerial refuelings enroute (Feb. 27-Mar. 2).
- 1950—First nonstop transatlantic jet flight. Col. David C. Schilling (USAF) flew 3,300 mi. from England to Limestone, Maine, in 10 hr. 1 min. (Sept. 22).
- 1950—First jet-plane battle. Four U. N. jets attacked by 8 to 12 Communist jets near Sinuiju, Korea. One enemy jet reported shot down; no U. N. losses (Nov. 8).
- 1951—First solo across North Pole. Charles F. Blair, Jr., flew a converted P-51 (May 29).
- 1952—First jetliner service. De Havilland Comet flight inaugurated by BOAC between London and Rome (Apr. 21). Round trip: 4 hr. 46 min. flying time.
- 1952—First transatlantic helicopter flight. Capt. Vincent H. McGovern and 1st Lt. Harold W. Moore piloted 2 Sikorsky H-19s from Westover, Mass., to Prestwick, Scot. (3,410 mi.). Trip was made in 5 steps, with flying time of 42 hr. 25 min. (July 15-31).
- 1952—First transatlantic round trip in same day. British Canberra twin-jet bomber flew from Aldergrove, N. Ire. to Gander, Nfld., and back in 7 hr. 5 min. flying time (Aug. 26).
- 1955—First transcontinental round trip in same day. Lt. John M. Conroy piloted F-86 Sabrejet across U. S. (Los Angeles New York) and back—5,085 mi.—in 1 hr. 33 min. 27 sec. (May 21).

## International Airplane Records

Source: National Aeronautic Association.

(over 3-kilometer—1.864 mi. course)

Speed (mph)	Date	Type plane	Pilot	Place
266.58	Nov. 4, '23	Curtiss	Lt. Williams (U.S.A.)	Mineola
278.48	Dec. 11, '24	Ferbois	Adj. Bonnet (France)	Istres
294.38	Sept. 5, '32	.....	Maj. J. H. Doolittle (U.S.A.)	Cleveland
304.98	Sept. 4, '33	Wedell-Williams	James R. Wedell (U.S.A.)	Glenview, Ill.
314.32	Dec. 25, '34	Caudron	Raymond Delmotte (France)	Istres
352.39	Sept. 13, '35	Hughes Special	Howard Hughes (U.S.A.)	Santa Anna
379.63	Nov. 11, '37	BF-113R	Herman Wurster (Germany)	Augsburg
469.22	Apr. 26, '39	ME-109R	Fritz Wendel (Germany)	Augsburg
606.25	Nov. 7, '45	Gloster Meteor IV	Gp. Capt. H. Wilson (Gr. Britain)	Herne Bay
615.78	Sept. 7, '46	Gloster Meteor	Gp. Capt. E. M. Donalson (Gr. Britain)	Little Hampton
650.80	Aug. 25, '47	Douglas D-558	Maj. Marion Carl, USMC (U.S.A.)	Muroc AF, Calif.
670.98	Sept. 15, '48	North American F-86A	Maj. R. L. Johnson (USAF)	Muroc AF, Calif.
698.51	Nov. 19, '52	North American F-86D	Capt. James S. Nash (USAF)	Salton Sea, Calif.
755.15	Oct. 29, '53	North American YF	Lt. Col. F. K. Everest, Jr. (USAF)	Salton Sea, Calif.
800+*	Aug. 20, '55	North American F-100C	Col. Horace A. Hanes (U.S.A.)	Palmdale, Calif.

(Fastest U. S. transcontinental—Lt. Col. Robert R. Scott, Republic F-84F from Los Angeles International Airport to Floyd Bennett Field, N. Y.—2,445.9 mi. in 3 hrs., 44 min., 54 sec., average speed 652.5 mph.—Mar. 9, 1955.)

\* Unofficial

### Distance

Distance (mi.)	Date	Crew	From	To
3,352.91	Oct. 28-29, '26	Lt. Costes & Capt. Rignot (France)	Le Bourget	Jask
3,910.90	June 4-6, '27	Clarence D. Chamberlin, C. A. Levine (U.S.A.)	New York	Eisleben, Germany
4,466.57	July 3-5, '28	Majs. A. Ferrarin, Del Prete (Italy)	Rome	Touros
4,911.93	Sept. 27-29, '29	Costes & Bellonte (France)	Le Bourget	Moulant
5,011.35	July 28-30, '31	Russel N. Boardman, John Polando (U.S.A.)	New York	Istanbul
5,656.93	Aug. 5-7, '33	Maurice Rossi, Paul Codos (France)	New York	Ryack
6,305.66	July 12-14, '37	Col. M. Gromov, Youmachiev, Daniline (U.S.S.R.)	Moscow	San Jacinto, Calif.
7,158.44	Nov. 5-7, '38	Sqd. Ldr. R. Kellelt (Gr. Britain)	Ismalia (Suez)	Darwin
7,916.00	Nov. 19-20, '45	Col. C. S. Irvine & Lt. Col. G. R. Stanley, (U.S.A.)	Guam	Washington, D. C.
11,235.60	Sept. 29-Oct. 1, '46	Comdr. Thomas D. Davies, Comdrs. Eugene P. Ranklin, Walter S. Reid, Lt. Comdr. Ray A. Tabeling (U.S.A.)	Perth, Australia	Columbus, Ohio

(Longest light airplane distance and longest solo, international—William P. Odom, U. S. Beech Bonanza (185 hp.) from Honolulu, Hawaii to Teterboro, N. J., 4,957.24 mi., March 8-9, 1949.)

### Distance (Closed Course)

Distance (mi.)	Date	Crew	Place
2,895.970	Aug. 3-5, '27	Edzard & Ristics (Germany)	Dessau
4,763.800	June 1-2, '28	Capt. Ferrarin & Del Prete (Italy)	Casal e del Paati
4,988.969	Dec. 15-17 '30	Costos & Codos (France)	Istres
5,088.267	May 31—June 2, '30	Maj. U. Maddalena & Lt. F. Ceconi (Italy)	Montecelio
6,444.881	June 7-10, '31	J. LeBrix & M. Doret (France)	Istres
6,587.441	Mar. 23-26, '32	Bossoutrot & Rossi (France)	Oran
7,239.588	May 13-15, '38	Comm. Fujita & Sgt. Maj. Takahashi (Japan)	Kisarazu
8,037.899	July 30—Aug. 1 '39	Angelo Tondi, Roberto Dagasso, Ferruccio Vignoli (Italy)	Rome
8,854.308	Aug. 1-2, '47	Lt. Col. O. F. Lassiter (U.S.) Capt. W. J. Valentine (U.S.)	Tampa, Fla.

### Altitude

Height (feet)	Date	Crew	Place
38,419	July 25, '27	Lt. C. C. Champion (U.S.A.)	Washington
41,795	May 26, '29	Willi Neuenhofen (Germany)	Dessau
43,166	June 4, '30	Lt. Apollo Soucek (U.S.A.)	Washington
43,976	Sept. 16, '32	Capt. Cyril F. Uwins (Gr. Britain)	Filton, Bristol
44,819	Sept. 28, '33	G. Lemoine (France)	Villacoublay
47,352	April 11, '34	Com. Renato Donati (Italy)	Rome
49,994	Sept. 28, '36	Sqd. Ldr. S. R. D. Swain (Gr. Britain)	South Farnborough
53,937	June 30, '37	Fl. Lt. M. J. Adam (Britain)	Farnborough
56,046	Oct. 22, '38	Col. Mario Pezzi (Italy)	Montecelio
59,445*	Mar. 23, '48	John Cunningham (Gr. Britain)	Hatfield
63,668*	May 4, '53	Walter F. Gibb (Gr. Britain)	Bristol
65,889*	Aug. 29, '55	Walter F. Gibb (Gr. Britain)	Bristol

\* Jet-propelled aircraft.

Absolute Altitude—72,394.795 ft. Capts. Orvil Anderson & Albert Stevens, U. S., Nov. 11, 1935 from Rapid City, S. D., in balloon. U. S. Airplane Record—47,910 ft. Maj. F. F. Ross, pilot, Lt. D. M. Davis, copilot, Lts. L. B. Barrier, C. B. Webster, F. O. P. Morrisett, Sgt. W. S. George, Harmon Field, Guam, May 15, 1946, Boeing B-29.



## Helicopter Records

Source: National Aeronautic Association.

### DISTANCE, AIRLINE

International: 1,217.14 mi.  
Elton J. Smith (U. S.) in Bell 47-D1 helicopter powered by 200-hp. Franklin; from Ft. Worth, Tex., to Niagara Falls, N. Y., Sept. 17, 1952.

### DISTANCE, CLOSED CIRCUIT

International: 778,311 mi.  
Jean Boulet (France) in S.E. 3 120 helicopter powered by 200-hp. Salmson 9 NH; Buc-Etampes-Rambouillet course, July 2, 1953.

### ALTITUDE

International: 26,931 ft.  
Jean Boulet (France) in S.E. "Alouette" helicopter powered by 400-hp. Turbomeca Artouste II; Buc Airport, June 6, 1955.

### MAXIMUM SPEED

International: 156,006 mph.  
W/O Billy I. Wester (USA) in Sikorsky XH-39 powered by 425-hp. Turbomeca Artouste II; Windsor Locks, Conn., Aug. 26, 1954.

### SPEED FOR 100 K.M. (CLOSED COURSE)

International: 122,749 mph.  
Harold E. Thompson (U. S.) in Sikorsky S-52-1 powered by 245-hp. Franklin; Milford, Conn., May 6, 1949.

### SPEED FOR 500 K.M. (CLOSED CIRCUIT)

International: 66,607 mph.  
Jean Boulet (France) in S.E. 3 120 helicopter powered by 200-hp. Salmson 9 NH; Buc-Etampes-Rambouillet course, July 2, 1952.

### SPEED FOR 1,000 K.M. (CLOSED CIRCUIT)

International: 66,642 mph.  
Majs. D. H. Jensen & W. C. Dodds (U. S.) in Sikorsky R-5A powered by 450-hp. Pratt & Whitney; Dayton, Ohio, Nov. 14, 1946.

## Certificated U. S. Airplane Pilots

Source: Civil Aeronautics Administration.

Year (As of Dec. 31)	Total	Airline transport	Com- mercial	Private
1939.....	33,706	1,197	11,677	20,832
1940.....	69,829	1,431	18,791	49,607
1941.....	129,947	1,587	34,578	93,782
1942.....	166,626	2,177	55,760	108,689
1943.....	173,206	2,315	63,940	106,950
1944.....	183,383	3,046	68,449	111,888
1945.....	296,895	5,815	162,873	128,207
1946.....	400,061	7,654	203,251	189,156
1947.....	433,241 <sup>1</sup>	7,059 <sup>1</sup>	181,912 <sup>1</sup>	244,270 <sup>1</sup>
1948.....	491,306 <sup>2</sup>	7,762 <sup>2</sup>	176,845 <sup>2</sup>	306,699 <sup>2</sup>
1949.....	525,174	9,025	187,769	328,380
1951.....	580,574	10,813	197,000	371,861
1952.....	581,218	11,357	193,575	376,286
1953.....	585,974	12,757	195,363	377,854
1954.....	613,695	13,341	201,441	398,913

<sup>1</sup> As of April 1, 1948. <sup>2</sup> As of May 1, 1949. NOTE: No figures available for 1950.

## U. S. Scheduled Airlines, 1955

Source: Civil Aeronautics Board.

Airline	Certificated route mileage <sup>1</sup>	Revenue passenger- miles, 1955 <sup>2</sup>
<b>Domestic (Trunk)</b>		
American.....	24,644	4,265,962,000
Braniff.....	11,559	604,674,000
Capital.....	9,478	792,095,000
Colonial.....	1,433	103,645,000
Continental # 29.....	6,259	221,223,000
Delta.....	13,294	952,601,000
Eastern.....	19,577	3,341,800,000
National.....	2,715	849,619,000
Northeast.....	3,216	116,450,000
Northwest.....	10,604	823,420,000
Trans World (TWA).....	18,292	2,866,342,000
United.....	17,033	3,753,964,000
Western.....	6,602	513,880,000
Total.....	143,706	19,205,675,000
<b>Domestic (Local Service)</b>		
Allegheny.....	2,691	55,547,000
Bonanza.....	1,490	22,661,000
Central.....	2,953	15,298,000
Frontier.....	5,072	45,611,000
Helicopter (Chicago).....	501	( <sup>3</sup> )
Helicopter (Los Angeles).....	591	152,000
Helicopter (New York).....	334	476,000
Lake Central.....	1,709	16,733,000
Mohawk.....	1,451	49,454,000
North Central.....	2,945	67,097,000
Ozark.....	3,514	36,219,000
Piedmont.....	3,335	69,341,000
Pioneer <sup>4</sup> .....	2,027	11,490,000
Southern.....	1,908	28,081,000
Southwest.....	1,711	47,132,000
Trans-Texas.....	3,916	35,363,000
West Coast.....	2,070	34,761,000
Total.....	38,218	535,416,000
<b>Foreign or Overseas</b>		
Aerovias Sud Americana <sup>5</sup> .....	3,292	.....
American.....	1,538	91,931,000
Braniff.....	8,361	75,291,000
Caribbean Atl.....	462	10,781,000
Colonial.....	2,030	25,704,000
Delta.....	3,630	55,615,000
Eastern.....	3,577	239,507,000
Hawaiian.....	389	53,760,000
Mackey.....	596	7,998,000
Midet.....	235	563,000
National.....	114	54,959,000
Northwest.....	17,522	193,981,000
Pan American.....	153,529	2,676,043,000
Panagra.....	10,438	160,681,000
Resort.....	13,645	1,178,000
Riddle <sup>6</sup> .....	2,309	.....
Samoan.....	93	( <sup>3</sup> )
Seaboard & Western <sup>6</sup> .....	14,825	.....
South Pacific.....	2,776	( <sup>3</sup> )
Trans-Pacific.....	379	24,370,000
Trans World (TWA).....	40,395	610,703,000
United.....	2,898	214,425,000
UMCA.....	378	734,000
Western.....	1,640	( <sup>3</sup> )
Total.....	285,051	4,498,224,000

<sup>1</sup> As of Dec. 31, 1955. <sup>2</sup> Calendar year. Scheduled services only. <sup>3</sup> Transports mail and property only. <sup>4</sup> Merged with Continental # 64 on Apr. 1, 1955. <sup>5</sup> All-cargo carrier. <sup>6</sup> Not operating.

## Representative American Aircraft Types

Source: Civil Aeronautics Administration.

Manufacturer <sup>1</sup>	Model	Max. std. seats	No. and make engine	Max. hp. per engine	Never exceed speed mph	Normal oper. speed (cruise)	Max. weight	Span	Length
<b>Transport</b>									
Boeing Airplane Co.....	377	93	4 P & W	3500	351	312	145,800	141' 3"	110' 4"
Convair Div.....	240	51	2 P & W	2400	306	270	42,500	91' 9"	74' 8"
	340	51	2 P & W	2400	306	270	46,500	105' 8"	79' 2"
	440	52	2 P & W	2500	310	289	49,100	105' 4"	81' 6"
Douglas A. C.....	DC-3	35	2 P & W	1200	262	217	26,900	95' 0"	64' 5½"
	DC-4	86	4 P & W	1450	300	250	73,000	117' 6"	93' 5"
	DC-6	87	4 P & W	2400	360	300	97,200	117' 6"	100' 7"
	DC-6A, B	112	4 P & W	2500	360	300	107,000	117' 6"	108' 11"
	DC-7	99	4 Wright	3250	360	310	122,200	117' 6"	108' 11"
	DC-7C	99	4 Wright	3700	406	359	140,000	127' 6"	112' 4"
Lockheed A. Corp.....	749	87	4 Wright	2500	324	271	107,000	123' 0"	95' 3"
	1049	96	4 Wright	2800	338	300	120,000	123' 0"	95' 3"
	1049C	102	4 Wright	3250	338	300	133,000	123' 0"	113' 6"
	1049G	112	4 Wright	3250	338	300	137,500	123' 0"	113' 6"
G. L. Martin Co.....	202A	53	2 P & W	2400	292	255	43,000	93' 3¾"	71' 4"
	404	53	2 P & W	2400	301	265	44,900	93' 3¾"	74' 7"
<b>Personal &amp; Executive</b>									
Aero Des. & Eng. Co.....	560	7	2 Lycoming	270	270	200	6,000	44' 0"	35' 5"
	680	7	2 Lycoming	340	270	210	7,000	44' 0"	35' 5"
Aeronca Mfg. Corp.....	15AC	4	1 Continental	145	139	110	2,050	37' 6"	25' 3"
Beech A. Corp.....	D50	6	2 Lycoming	285	252	200	6,300	45' 3"	31' 6"
	F35	4	1 Continental	205	202	175	2,750	32' 10"	25' 2"
	E18S	10	2 P & W	450	256	205	9,300	47' 7"	33' 11½"
Cessna A. C.....	172	4	1 Continental	145	160	140	2,200	36' 0"	25' 0"
	180	4	1 Continental	225	184	160	2,550	36' 0"	25' 0"
	182	4	1 Continental	230	184	160	2,550	36' 0"	25' 0"
	195B	5	1 Jacobs	275	200	178	3,350	36' 2"	27' 4"
	310	5	2 Continental	240	246	200	4,600	36' 0"	27' 0"
Helio A. Corp.....	H-391B	4	1 Lycoming	260	189	150	2,800	35' 0"	27' 3"
Piper A. Corp.....	PA-18	2	1 Lycoming	150	138	...	1,760	...	...
	PA-22	4	1 Lycoming	125	158	126	1,800	29' 4"	20' 7"
	PA-23	4	2 Lycoming	150	208	165	3,500	37' 0"	27' 1"
Ryan Aero. Co.....	Navion B	4	1 Lycoming	260	190	169	2,850	33' 4½"	27' 3"
Taylorcraft, Inc.....	20	4	1 Continental	208	170	141	2,750	...	...
Temco A. Corp.....	D16A (Twin Navion)	4	2 Lycoming	160	180	...	4,600	33' 5"	27' 2"
<b>Helicopters</b>									
Bell A. Corp.....	47G	3	1 Franklin	200	90	...	2,350	.....	.....
Cessna A. C., Helicopter Div.....	CH-1	2	1 Continental	160	122	...	3,000	.....	.....
Doman Helicopters, Inc.....	LZ-5	6	1 Lycoming	400	90	...	5,200	.....	.....
Hiller Helicopters.....	UH-12C	3	1 Franklin	200	84	...	2,500	.....	.....
Kaman A. Corp.....	K-240	2	1 Lycoming	250	87	...	3,000	.....	.....
Sikorsky A. Div.....	S-52-2	4	1 Franklin	245	115	...	2,700	.....	.....
	S-55	12	1 P & W	550	...	...	7,200	.....	.....

<sup>1</sup> A. C.—Aircraft Company; A. Corp.—Aircraft Corporation; A. Div.—Aircraft Division.

## America's Warplane Production Record, 1940-45

Source: Civil Aeronautics Administration.

Type	1940	1941	1942	1943	1944	1945	1940-45
Total.....	6,019	19,433	47,836	85,898	96,318	47,714	303,218
Bombers.....	1,191	4,115	12,627	29,355	35,003	16,492	98,783
Fighters.....	1,685	4,416	10,769	23,988	38,873	21,696	101,427
Photographic and reconnaissance.....	121	727	1,468	734	259	531	3,840
Transport.....	290	532	1,984	7,012	9,834	4,629	24,281
Trainer.....	2,731	9,373	17,631	19,939	7,577	1,309	58,560
Other*.....	1	270	3,357	4,870	4,772	3,057	16,327

\* Includes special purpose, rotary wing, and liaison aircraft.

# Important American Aircraft Types (U. S. Air Force)

Source: U. S. Department of Defense.

Type	Manufacturer	Power plant <sup>1</sup>	Maximum take-off ratings	Span, ft.	Length, ft.	Height, ft.	Weight	Speed	Crew
<b>BOMBERS</b>									
B-26A thru F	Douglas	2 R2800 P-79	2,000 hp.	70.0	51.3	18.5	40,000	Over 300 <sup>3</sup>	3
B-29 & B-29A	Boeing	4 R3350 W-57 or 57A	2,200 hp.	141.2	99.0	27.8	140,000	345 <sup>3</sup>	11
B-36D thru J	Convair	6 R4360 P-53	3,800 hp.	230.0	162.1	46.8	400,000	Over 435	15
		4 J47 GE-19	5,200 lb.						
B-47E	Boeing	6 J47 GE-25	6,000 lb.	116.0	107.1	28.0	200,000	600 class	3
B-50B	Boeing	4 R4360 P-35	3,500 hp.	141.2	99.0	32.7	170,000	Over 400	10
B-52A	Boeing	8 J57 P-1	10,000 lb.	185.0	156.5	48.3	350,000	Over 600	6
B-57B	Martin	2 J65 W-5	7,200 lb.	64.0	65.5	14.8	50,000	Over 500 <sup>3</sup>	2
B-66	Douglas	2 J71 A-9	.....	72.5	75.1	23.6	.....	600-700	3
<b>FIGHTERS</b>									
F-80C	Lockheed	1 J33 A-31 or 35	5,200 lb.	38.9	34.5	11.3	16,000	600 class	1
RF-84F	Republic	1 J65 W-3	7,200 lb.	33.6	47.4	15.0	25,000	Over 600	1
F-84G	Republic	1 J35 A-29	5,600 lb.	36.4	38.1	12.6	18,000	600 class	1
F-86D	North American	1 J47 GE-33	7,650 lb. <sup>2</sup>	37.1	40.3	15.0	18,000	650 class	1
F-86F	North American	1 J47 GE-27	5,970 lb.	37.1	37.5	14.7	17,000	650 class	1
F-86H	North American	1 J73 GE-3	.....	37.1	38.8	15.0	.....	Over 650	1
F-89C	Northrop	2 J35 A-33	5,600 lb.	56.1	53.4	17.6	40,000	600 class	2
F-89D	Northrop	2 J35 A-35	5,600 lb.	57.8	53.8	17.5	40,000	600 class	2
F-94C	Lockheed	1 J48 P-5	6,250 lb.	37.3	44.5	14.9	20,000	600 class	2
F-100A	North American	1 J57 P-7	10,000 lb.	36.8	46.2	13.3	.....	Supersonic	1
F-101A	McDonnell	2 J57 P-13	10,000 lb.	39.7	67.4	18.0	.....	Supersonic	1
F-102A	Convair	1 J57 P-11	10,000 lb.	37.0	52.5	18.0	.....	Supersonic	1
F-104	Lockheed	Curtiss-Wright J65	Over 7,200	.....	.....	.....	.....	Supersonic	1
<b>TRANSPORTS</b>									
C-45H	Beech	2 R985-AN-14B P	450 hp.	47.6	34.2	10.7	9,000	190 top <sup>3</sup>	2
C-47D	Douglas	2 R1830-90D P	1,200 hp.	95.0	64.4	16.9	33,000	200 top <sup>3</sup>	5
C-54G	Douglas	4 R2000-9 P	1,450 hp.	117.5	93.8	27.5	82,500	300 top	3
C-74	Douglas	4 R4360-49 P	3,500 hp.	173.3	124.2	43.8	165,000	Over 300	5
C-97C	Boeing	4 R4360-35A P	3,250 hp.	141.2	110.3	38.3	175,000	Over 350	5
C-118A	Douglas	4 R2800-52W P	2,200 hp.	117.5	106.8	28.8	107,000	360	5
C-119G	Fairchild	2 R3350-85 W	3,250 hp.	109.3	86.5	26.2	74,000	250	5
C-121B	Lockheed	4 R3350-75 W	2,500 hp.	123.0	95.3	23.0	100,000	350 top	5
C-123B	Fairchild	2 R2800-99W P	2,500 hp.	110.0	75.7	34.1	50,000	240 top	2
C-124C	Douglas	4 R4360-63 P	3,800 hp.	174.1	130.0	48.3	185,000	Over 300	5
C-130	Lockheed	4 T56-A-1	3,750 hp.	132.7	94.8	38.3	108,000	.....	4
C-131B	Convair	2 R2800-99W P	2,500 hp.	105.3	79.2	28.1	47,000	265 top <sup>3</sup>	2
<b>HELICOPTERS</b>									
H-5H	Sikorsky	1 R985-AN5 P	450 hp.	49.0	41.1	13.0	6,500	105 top	2
H-13E	Bell	1 O-335-SA	200 hp.	35.1	31.0	9.5	2,500	100	1
H-19A	Sikorsky	1 R1340-57 P	600 hp.	53.0	42.1	15.5	8,000	Over 90	2
H-21C	Piasecki	1 R1820-103 W	1,425 hp.	44.0	52.5	14.5	15,000	Over 110 <sup>3</sup>	2
H-23B	Hiller	1 Franklyn 6V4-200-C-33	200 hp.	35.0	38.5	9.8	2,500	84	1
H-25	Piasecki	1 Continental R975-42	550 hp.	35.0	31.9	12.5	6,000	Over 100	2

<sup>1</sup> A—Allison; GE—General Electric; P—Pratt & Whitney; W—Wright. <sup>2</sup> With afterburner. <sup>3</sup> Knots.

## Peacetime Production Record

Year	Military	Personal	Transport	Total	Year	Military	Personal	Transport	Total
1946.....	1,669 <sup>2</sup>	34,568 <sup>1</sup>	433 <sup>1</sup>	36,670	1951.....	( <sup>3</sup> )	2,279 <sup>1</sup>	198 <sup>1</sup>	( <sup>3</sup> )
1947.....	2,100 <sup>2</sup>	15,399 <sup>1</sup>	278 <sup>1</sup>	17,717	1952.....	( <sup>3</sup> )	3,057 <sup>1</sup>	452 <sup>1</sup>	( <sup>3</sup> )
1948.....	( <sup>3</sup> )	7,039 <sup>1</sup>	263 <sup>1</sup>	( <sup>3</sup> )	1953.....	( <sup>3</sup> )	3,825 <sup>1</sup>	309 <sup>1</sup>	( <sup>3</sup> )
1949.....	( <sup>3</sup> )	3,379 <sup>1</sup>	166 <sup>1</sup>	( <sup>3</sup> )	1954.....	( <sup>3</sup> )	3,098 <sup>1</sup>	291 <sup>1</sup>	( <sup>3</sup> )
1950.....	( <sup>3</sup> )	3,391 <sup>1</sup>	129 <sup>1</sup>	( <sup>3</sup> )	1955.....	( <sup>3</sup> )	4,575 <sup>1</sup>	245 <sup>1</sup>	( <sup>3</sup> )

<sup>1</sup> Source: Census Bureau. <sup>2</sup> Source: Statistical Control Div. of Air Comptroller, Air Force. <sup>3</sup> Not for publication.



# ASTRONOMY AND CALENDAR

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## Kinds of Time

Of the three main kinds of time (sidereal, apparent solar, and mean solar), the two kinds used in our calendar pages (local civil and standard time) are both types of mean solar time.

*Sidereal time* is used mostly in astronomy. It is nearly but not exactly star-time, and is measured by the diurnal rotation of the vernal equinox point in the sky. Sidereal days are shorter than solar days by about  $3^m 56^s$  of mean time.

*Apparent solar time* is measured by the apparent diurnal rotation of the sun, and is the hour-angle of the sun  $+12^h$ . When the sun is at lower transit we have  $0^h$  by apparent time; when it is on the upper meridian the apparent time is  $12^h$ . The sun is not a good timekeeper, its eastward motion along the ecliptic being irregular, so apparent days are of unequal duration.

*Mean solar time* is the hour-angle of the "mean sun"  $+12^h$ . The mean sun is an imaginary body moving uniformly along the celestial equator. When the mean sun is on the lower meridian, the mean time is  $0^h$ . The actual sun is sometimes ahead of and sometimes behind the mean sun, and the difference at any moment is the *equation of time*. When the sun is west of the mean sun, we have the "sun fast" situation, and the sun crosses the meridian before the mean sun; when the sun is east of the mean sun, we have the "sun slow" condition, and the sun transits after the mean sun. The equation of time helps in conversion of apparent and mean solar time. No clock runs on apparent time but ordinary clocks keep mean solar time in some form.

*Local civil time* (L.C.T.) is the mean solar time of a designated meridian, and its day begins with the mean sun at lower transit. This is midnight, the moment of *zero hour* ( $0^h$ ). Ordinary clocks are not set to local civil time, because this time—

at any instant—varies with any change of longitude.

*Standard time* is the local civil time of a standard meridian, but used over an entire time-zone. In the U. S. the four zones (Eastern, Central, Mountain, and Pacific) are based upon the standard meridians of  $75^\circ$ ,  $90^\circ$ ,  $105^\circ$ , and  $120^\circ$  respectively. Ordinary clocks run on standard time, a type of mean solar time. In the summer, in certain localities, they run on advanced time (as daylight saving time) but this is only a clock-setting, and is actually standard time. Daylight saving time for a certain zone is the normal standard time of one zone to the east. While popular in certain metropolitan areas, it is not used for scientific observations. Advanced time is  $1^h$  later on the clock-face than the normal standard time of the same zone.

*Time zones.* A time-zone chart of the entire world shows clearly how the world is divided into 24 time zones according to longitude. In a large proportion of countries, standard time is in use, and commonly the time on the clock-face reads 1 hour later for each zone east of a given zone, and 1 hour earlier for each zone west of a given zone. The zero time-zone of the world runs thru Greenwich, Eng., and the zones are so marked that the standard time at a particular station, added algebraically to the zone-number at the bottom gives the corresponding universal time or Greenwich civil time. For example, 3 A.M., M.S.T.  $+ 7^h = 10^h$  U.T. or G.C.T.

Mexico, except for the northern part of Lower California, uses 90th-meridian time entirely. Canada uses the 4 standard-time zones of the U. S., and two others: (1) 60th-meridian or Atlantic standard time, for New Brunswick, Nova Scotia, and Quebec (east of  $68^\circ$  w.),  $4^h$  earlier than Greenwich, and (2) 135th-meridian or Yukon standard time,  $9^h$  earlier than Greenwich.

Newfoundland and the Labrador coast use Newfoundland standard time, 3<sup>h</sup> 30<sup>m</sup> earlier than Greenwich. Alaska uses 4 time-zones, those based on the following meridians of west longitude: 120° (Juneau), 135° or Yukon standard time (Yakutat), 150° or Alaska standard time (Fairbanks), and 165° (Nome).

*The Date-line.* At any moment of time, usually there are parts of two different but contiguous days going on at different places on the earth. The change of date is made at the date-line, an imaginary line that follows essentially the course of the 180° meridian in the Pacific Ocean. At points east of the date-line the calendar day is 1 day earlier than at places to the west of

the line. At a point just west of the date-line, let us suppose it is 18<sup>h</sup> or 6 P.M., L.C.T., on Aug. 1. At the same moment it is 12<sup>h</sup> at long. 90° e., 6<sup>h</sup> at long. 0°, and 0<sup>h</sup> at long. 90° w., all of the same date, Aug. 1. West of long. 90° w., it is not yet 0<sup>h</sup> (midnight); hence between 90° w. and 180° the date must be July 31. As one crosses the date-line going eastward his watch remains the same but the date changes abruptly to 1 day earlier, so the traveler repeats part of a calendar day. As one crosses the line going westward the date changes abruptly to one day later, causing him to omit a calendar day. (According to actual practice, the change is made at night regardless of the true moment of crossing.)

## On Using the Following Calendar Pages

*Sun fast and sun slow.* This is the equation of time, as previously discussed.

*Sunrise and sunset.* For accurate results, two corrections to the tabular values are necessary: (1) interpolation for latitude, and (2) reduction to standard time. When the observer is at a latitude between two given latitudes, he computes a time for sunrise or sunset that lies between the times shown for the given latitudes. (Our table of longitudes and latitudes is a guide for one's position, but a large atlas may be consulted.) For example, on Aug. 11 the sun rises at 5:25 A.M. at lat. 30° and at 5:17 at lat. 35°, the difference being -8<sup>m</sup>. An observer at Jackson, Miss., at lat. 32° 20' would be about 0.5 the distance between 30° and 35°.  $(0.5)(-8^m) = -4^m.0$ , and therefore at his station sunrise occurs at 5:25 - 4<sup>m</sup> or 5:21 A.M., L.C.T. The station (long. 90°12' w.) is 0°12' or 0.2 west of the 90° standard meridian.  $(0.2)(+4^m) = +0^m.8$ ; 5:21 + 1<sup>m</sup> = 5:22 A.M., C.S.T. for sunrise at Jackson, Miss.

In the sun and moon tables, the data has to be given in LOCAL CIVIL TIME. This is not standard time, but has to be reduced to standard time.

To reduce local civil time to standard time, decrease the L.C.T. by 4<sup>m</sup> for every degree the station is east of the standard meridian, or increase the L.C.T. by 4<sup>m</sup> for every degree the station is west of the standard meridian.

*Moonrise and moonset.* For accurate results at any station in the U. S., three corrections are needed: (1) interpolation for latitude, (2) correction for longitudes west of 82½°, and (3) reduction to standard time.

(1) Interpolation for latitude follows the same method as for the sun.

(2) Use of the *a-factor*. The moon tables are exact for the given latitudes and for longitude 75° w. The *a-factor* adapts them to any longitude in the U. S. For observers in the eastern states and as far west

as long. 82½° [Port Huron, Mich., Mansfield, Ohio, Huntington, W. Va., Asheville, N. C., Tampa, Fla.], no *a-factor* is used. For stations in the 90° zone, between 82½° and 97½°, use the *a-factor* in the column "90". The "*a-factor*, moonrise" is always to be added to the time of moonrise as derived from the main tables, and the "*a-factor*, moonset" is added to the time of moonset as derived. The boundary at 97½° between the 90° and the 105° zones, runs through Grafton, N. Dak., Webster, S. Dak., Norfolk, Nebr., Salina, Kans., Oklahoma City, Okla., Fort Worth and Corpus Christi, Tex. Observers in the 105° zone, between 97½° and 112½° long., will use the "105°" *a-factor*, and those west of 112½° will use the "120°" *a-factor*, the eastern boundary (112½°) of the 120° zone going through Butte, Mont., Pocatello, Idaho, Panguitch, Utah, and Prescott, Ariz. These zones do not correspond to the irregular divisions of the standard-time belts.

(3) Change L.C.T. to standard time.

*Ex.*, find moonset time on June 1 at Cheyenne, Wyo., long. 104°52' w., lat 41°9' n. (a) Moonset for lat. 40° is 10:12 P.M. for 45°, 10:23. The increase is +11<sup>m</sup>. The station is about 1°15/5° or 0.23 the distance between 40° and 45°.  $(0.23)(+11^m) = +2^m.53$ . 10:12 + 3<sup>m</sup> = 10:15 P.M., L.C.T. (b) *a-factor*, moonset, = 3<sup>m</sup>, giving 10:18 P.M., L.C.T. (c) Reduce to standard time 105° - 104°9' = 0°1 east of the standard meridian.  $(0.1)(-4^m) = -0^m.4$ ; 10:18 - 0 = 10:18 P.M., M.S.T., moonset for Cheyenne, Wyo.

*Moon's transit.* This data indicates the local civil time of the moon crossing the observer's meridian. The time is the same for all latitudes. It is nearly correct for all longitudes in the U. S.; for more exact work use—for every day—a mean *a-factor* of 2<sup>m</sup>, 4<sup>m</sup>, 6<sup>m</sup>. That is, for the 75° zone, use no correction; for the 90° zone add 2<sup>m</sup> to the time in the tables; for the 105° zone add 4<sup>m</sup>; for the 120° zone add 6<sup>m</sup>. Afterward, reduce the L.C.T. to standard time

# JANUARY 1957

Jan.	Sun slow	LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonset		
		Sun rise	Sun set	Moon rise	Moon set	Sun rise	Sun set	Moon rise	Moon set	Sun rise	Sun set	Moon rise	Moon set	Sun rise	Sun set	Moon rise	Moon set	Moon's upper transit	90°	
1 Tue.	3 29	m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	m	m
2 Wed.	3 57	2	6 56	7 7	5 59	7 8	4 59	7 17	5 49	7 22	4 45	7 29	5 39	7 38	4 29	7 42	5 25	12 27	2	m
3 Thu.	4 25	1	6 56	7 7	6 52	7 8	5 0	7 55	6 44	7 22	4 46	8 5	6 36	7 39	4 30	8 16	6 24	1 13	2	m
4 Fri.	4 53	1	6 56	7 7	7 45	7 8	5 1	8 31	7 39	7 22	4 47	8 38	7 33	7 39	4 31	8 47	7 24	1 58	2	m
5 Sat.	5 20	1	6 57	7 7	8 38	7 9	5 2	9 2	8 34	7 22	4 48	9 8	8 36	7 38	4 32	9 14	8 24	2 41	2	m
6 Sun.		2	6 57	7 7	9 30	7 9	5 2	9 32	9 28	7 22	4 49	9 35	9 26	7 38	4 33	9 39	9 24	3 23	2	m
7 Mon.	5 47	1	6 57	7 7	10 22	7 9	5 3	10 1	10 22	7 22	4 50	10 2	10 23	7 38	4 34	10 3	10 24	4 4	2	m
8 Tue.	6 13	1	6 57	7 7	11 15	7 9	5 4	10 31	11 18	7 22	4 51	10 29	11 21	7 38	4 35	10 27	11 25	4 46	2	m
9 Wed.	6 39	1	6 57	7 7	11 5	7 9	5 5	11 2	11 5	7 22	4 52	10 57	11 28	7 38	4 36	10 52	11 30	5 30	3	m
10 Thu.	7 4	1	6 57	7 7	11 41	7 9	5 6	11 34	0 15	7 22	4 53	11 28	0 21	7 38	4 37	11 19	0 27	6 16	3	m
11 Fri.	7 29	2	6 57	7 7	12 20	7 9	5 7	12 12	1 14	7 22	4 54	12 2	1 22	7 37	4 38	11 51	1 33	7 5	3	m
12 Sat.	7 53	2	6 57	7 7	1 3	7 9	5 8	12 54	2 15	7 22	4 55	12 43	2 25	7 37	4 39	12 29	2 39	7 57	3	m
13 Sun.	8 16	2	6 57	7 7	2 5	7 9	5 9	1 43	3 17	7 21	4 56	1 30	3 29	7 36	4 41	1 15	3 45	8 54	3	m
14 Mon.	8 39	3	6 57	7 7	3 6	7 8	5 9	1 43	3 17	7 21	4 57	2 27	4 32	7 36	4 42	2 11	4 48	9 54	3	m
15 Tue.	9 1	3	6 57	7 7	4 7	7 8	5 10	2 41	4 19	7 21	4 58	3 33	5 33	7 35	4 43	3 18	5 47	10 56	2	m
16 Wed.	9 23	3	6 57	7 7	5 6	7 8	5 12	4 55	6 15	7 20	4 59	4 44	6 26	7 35	4 44	4 31	6 40	11 57	2	m
17 Thu.	9 44	3	6 57	7 7	6 15	7 8	5 13	6 7	7 5	7 20	5 0	5 59	7 14	7 34	4 46	5 48	7 25	.....	2	m
18 Fri.	10 4	3	6 57	7 7	7 24	7 7	5 13	7 19	7 50	7 19	5 1	7 14	7 57	7 34	4 47	7 7	8 4	0 57	2	m
19 Sat.	10 24	3	6 56	7 7	8 32	7 7	5 14	8 30	8 31	7 19	5 2	8 28	8 34	7 33	4 48	8 25	8 39	1 54	2	m
20 Sun.	10 42	3	6 56	7 7	9 38	7 6	5 16	9 39	9 9	7 18	5 4	9 40	9 10	7 32	4 50	9 41	9 10	2 48	1	m
21 Mon.	11 1	3	6 56	7 7	10 42	7 6	5 17	10 46	9 46	7 18	5 5	10 49	9 43	7 32	4 51	10 54	9 40	3 41	1	m
22 Tue.	11 18	3	6 55	7 7	11 44	7 6	5 17	11 50	10 23	7 17	5 6	11 57	10 17	7 31	4 52	.....	10 11	4 32	1	m
23 Wed.	11 35	3	6 55	7 7	12 11	7 5	5 18	12 0	11 0	7 17	5 7	12 0	10 32	7 30	4 54	0 5	10 43	5 23	2	m
24 Thu.	12 6	2	6 54	7 7	1 43	7 4	5 20	1 53	12 23	7 15	5 8	1 2	11 50	7 29	4 55	1 14	11 18	6 13	2	m
25 Fri.	12 20	2	6 54	7 7	2 39	7 4	5 21	2 49	1 9	7 15	5 11	3 2	12 56	7 28	4 56	2 18	11 57	7 4	2	m
26 Sat.	12 33	2	6 54	7 7	3 31	7 3	5 23	3 43	1 58	7 14	5 12	3 56	1 45	7 27	4 59	4 12	1 29	8 45	2	m
27 Sun.	12 46	2	6 53	7 7	4 21	7 3	5 24	4 31	2 50	7 13	5 13	4 45	2 37	7 26	5 1	5 0	2 23	9 35	2	m
28 Mon.	12 58	2	6 53	7 7	5 6	7 2	5 25	5 16	3 48	7 12	5 14	5 28	3 33	7 25	5 2	5 42	3 19	10 24	2	m
29 Tue.	13 10	1	6 52	7 7	6 24	7 1	5 26	6 56	4 38	7 11	5 15	6 6	4 29	7 24	5 3	6 19	4 17	11 10	2	m
30 Wed.	13 20	1	6 52	7 7	7 1	7 1	5 27	7 32	5 33	7 11	5 17	6 40	5 26	7 23	5 5	6 50	5 16	11 56	2	m
31 Thu.	13 29	1	6 51	7 7	8 3	7 0	5 28	7 4	6 28	7 10	5 18	7 11	6 23	7 21	5 6	7 18	6 16	12 39	2	m



# FEBRUARY 1957

Feb.	Sun slow	LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonset		
		Sun-rise	Sun-set	Moon-rise	Moon-set	Sun-rise	Sun-set	Moon-rise	Moon-set	Sun-rise	Sun-set	Moon-rise	Moon-set	Sun-rise	Sun-set	Moon-rise	Moon-set	Moon's upper transit	90°	
																			105°	120°
1 Fri.	m s	13 38	6 51	5 37	7 32	6 59	5 29	7 35	8 16	7 40	5 19	7 40	8 16	7 20	5 8	7 44	8 16	1 22	m	m
2 Sat.	13 46	1	6 50	5 38	8 4	6 58	5 30	8 5	8 16	7 40	5 19	7 40	8 16	7 20	5 8	7 44	8 16	2 3	2	5
3 Sun.	13 53	1	6 49	5 39	8 35	6 58	5 31	8 34	9 11	7 39	5 21	8 34	9 11	7 18	5 10	8 32	9 17	2 45	2	5
4 Mon.	13 59	1	6 49	5 40	9 7	6 57	5 32	9 4	10 7	7 36	5 23	9 1	10 12	7 17	5 12	8 56	10 18	3 28	2	5
5 Tue.	14 5	1	6 48	5 41	9 41	6 56	5 33	9 36	11 4	7 5	5 24	9 30	11 11	7 15	5 13	9 23	11 19	4 12	3	5
6 Wed.	14 9	2	6 47	5 41	10 18	6 55	5 34	10 11	.....	7 4	5 25	10 2	.....	7 14	5 15	9 52	.....	4 58	3	5
7 Thu.	14 13	2	6 47	5 42	10 58	6 54	5 35	10 49	0 2	7 3	5 26	10 39	0 12	7 13	5 16	10 26	0 23	5 48	3	5
8 Fri.	14 16	2	6 46	5 43	11 44	6 53	5 36	11 33	1 2	7 2	5 27	11 21	1 14	7 11	5 18	11 8	1 27	6 41	3	5
9 Sat.	14 18	2	6 45	5 44	12 37	6 52	5 37	12 25	2 2	7 1	5 29	12 12	2 14	7 10	5 19	11 57	2 30	7 37	3	5
10 Sun.	14 20	3	6 45	5 45	1 36	6 51	5 38	1 24	3 1	6 59	5 30	1 12	3 14	7 9	5 21	12 55	3 30	8 36	2	5
11 Mon.	14 20	3	6 44	5 45	2 40	6 50	5 39	2 29	3 57	6 58	5 31	2 18	4 10	7 7	5 22	2 3	4 25	9 36	2	4
12 Tue.	14 20	3	6 43	5 46	3 48	6 49	5 40	3 39	4 49	6 57	5 32	3 29	5 0	7 6	5 23	3 17	5 13	10 35	2	4
13 Wed.	14 19	3	6 42	5 47	4 58	6 48	5 41	4 51	5 37	6 56	5 33	4 44	5 46	7 4	5 25	4 35	5 55	11 34	2	4
14 Thu.	14 17	3	6 41	5 48	6 7	6 48	5 42	6 4	6 21	6 55	5 34	6 0	6 26	7 3	5 26	5 53	6 32	.....	2	3
15 Fri.	14 15	3	6 40	5 49	7 16	6 46	5 43	7 15	7 1	6 53	5 36	7 14	7 3	7 1	5 28	7 14	7 6	0 31	2	3
16 Sat.	14 11	3	6 39	5 49	8 23	6 45	5 43	8 25	7 40	6 52	5 37	8 28	7 39	7 0	5 29	8 31	7 38	1 26	1	3
17 Sun.	14 8	3	6 38	5 50	9 28	6 44	5 45	9 33	8 18	6 51	5 38	9 39	8 14	6 58	5 31	9 45	8 10	2 20	1	3
18 Mon.	14 3	3	6 38	5 51	10 32	6 43	5 45	10 39	8 57	6 49	5 39	10 48	8 50	6 57	5 32	10 57	8 42	3 13	2	3
19 Tue.	13 58	3	6 37	5 52	11 33	6 42	5 46	11 42	9 38	6 48	5 40	11 53	9 28	6 55	5 33	.....	9 18	4 5	2	3
20 Wed.	13 52	2	6 36	5 53	.....	6 41	5 47	.....	10 20	6 47	5 41	.....	10 9	6 54	5 35	0 6	9 56	4 58	2	4
21 Thu.	13 45	2	6 35	5 53	0 32	6 40	5 48	0 42	11 6	6 45	5 43	0 54	10 54	6 52	5 36	1 9	10 39	5 50	2	4
22 Fri.	13 38	2	6 34	5 54	1 27	6 39	5 49	1 38	11 55	6 44	5 44	1 51	11 43	6 50	5 37	2 6	11 27	6 41	2	4
23 Sat.	13 30	2	6 33	5 55	2 17	6 37	5 50	2 29	12 46	6 43	5 45	2 42	12 34	6 49	5 39	2 58	12 18	7 32	2	4
24 Sun.	13 21	2	6 32	5 55	3 3	6 36	5 51	3 14	1 39	6 41	5 46	3 27	1 28	6 47	5 40	3 41	1 14	8 21	2	5
25 Mon.	13 12	2	6 31	5 56	3 46	6 35	5 52	3 55	2 33	6 40	5 47	4 6	2 24	6 45	5 42	4 19	2 11	9 8	2	5
26 Tue.	13 3	1	6 30	5 57	4 24	6 34	5 53	4 32	3 28	6 38	5 48	4 42	3 20	6 44	5 43	4 52	3 10	9 54	2	5
27 Wed.	12 53	1	6 28	5 58	5 0	6 32	5 54	5 7	4 22	6 37	5 49	5 13	4 17	6 42	5 44	5 22	4 9	10 37	2	5
28 Thu.	12 42	1	6 28	5 58	5 34	6 31	5 55	5 38	5 17	6 35	5 51	5 43	5 13	6 40	5 46	5 48	5 9	11 20	2	5

# MARCH 1957

Mar.	Sun slow	a-factor, moonrise		LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonset																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		90°		105°		120°		Sun-rise		Moon-rise set		Sun-rise		Moon-rise set		Sun-rise		Moon-rise set		Sun-rise		Moon-rise set		Moon's upper transit																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		m	s	m	m	m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m

# APRIL 1957

Apr.	Sun slow	LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonset	
		Sun	rise	set	Moon- rise	Moon- set	Sun- rise	Sun- set	Moon- rise	Moon- set	Sun- rise	Sun- set	Moon- rise	Moon- set	Moon's upper transit	90°		105°	120°
1 Mon.	m s	4	5	7	6	7	5	6	6	7	5	6	6	7	h m	m	m	m	m
2 Tue.	3 45	3	5	8	7	8	6	7	7	8	6	7	7	8	12 54	3	5	5	8
3 Wed.	3 27	2	4	5	6	7	5	6	6	7	5	6	6	7	1 42	3	5	5	7
4 Thu.	3 9	2	4	5	5	6	4	5	5	6	4	5	5	6	2 32	2	5	7	7
5 Fri.	2 52	2	5	7	4	5	3	4	4	5	3	4	4	5	3 25	2	5	7	1
6 Sat.	2 34	3	5	8	6	7	5	6	6	7	5	6	6	7	4 20	2	4	6	6
7 Sun.	2 17	3	5	8	6	7	5	6	6	7	5	6	6	7	5 16	2	4	6	6
8 Mon.	2 0	3	6	9	7	8	6	7	7	8	6	7	7	8	6 11	2	4	6	6
9 Tue.	1 44	3	6	9	7	8	6	7	7	8	6	7	7	8	7 1	2	3	5	5
10 Wed.	1 27	3	6	9	7	8	6	7	7	8	6	7	7	8	8 55	2	3	4	4
11 Thu.	1 11	3	6	9	7	8	6	7	7	8	6	7	7	8	9 48	1	3	4	4
12 Fri.	0 55	3	6	9	7	8	6	7	7	8	6	7	7	8	10 41	1	3	4	4
13 Sat.	0 39	3	6	9	7	8	6	7	7	8	6	7	7	8	11 35	2	3	5	5
14 Sun.	0 24	3	6	9	7	8	6	7	7	8	6	7	7	8	12 29	2	3	5	5
15 Mon.	0 9	3	5	8	6	7	5	6	6	7	5	6	6	7	1 23	2	4	5	5
FAST	FAST	3	5	7	6	7	5	6	6	7	5	6	6	7	2 29	2	4	5	5
16 Tue.	0 6	3	5	7	6	7	5	6	6	7	5	6	6	7	3 24	2	4	6	6
17 Wed.	0 20	2	4	7	5	6	4	5	5	6	4	5	5	6	4 11	2	4	6	6
18 Thu.	0 34	2	4	6	5	6	4	5	5	6	4	5	5	6	5 4	2	4	6	6
19 Fri.	0 48	2	3	5	4	5	3	4	4	5	3	4	4	5	6 33	2	5	7	7
20 Sat.	1 1	2	3	5	4	5	3	4	4	5	3	4	4	5	7 29	2	5	7	7
21 Sun.	1 14	2	3	4	3	4	3	4	3	4	3	4	3	4	8 46	2	5	7	7
22 Mon.	1 26	1	3	4	3	4	3	4	3	4	3	4	3	4	9 53	2	5	7	7
23 Tue.	1 38	1	2	3	2	3	2	3	2	3	2	3	2	3	10 41	2	5	7	7
24 Wed.	1 49	1	2	3	2	3	2	3	2	3	2	3	2	3	11 35	2	5	7	7
25 Thu.	2 0	1	2	3	2	3	2	3	2	3	2	3	2	3	12 29	2	5	7	7
26 Fri.	2 10	1	2	3	2	3	2	3	2	3	2	3	2	3	1 23	2	5	7	7
27 Sat.	2 20	1	2	4	3	4	3	4	3	4	3	4	3	4	2 18	2	5	7	7
28 Sun.	2 29	1	3	4	3	4	3	4	3	4	3	4	3	4	3 12	2	5	7	7
29 Mon.	2 38	2	3	5	4	5	4	5	4	5	4	5	4	5	4 6	3	6	8	8
30 Tue.	2 46	2	3	5	4	5	4	5	4	5	4	5	4	5	5 5	3	6	8	8



# MAY 1957

May	Sun fast	LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonset	
		Sun-rise		Moon-rise set		Sun-rise		Moon-rise set		Sun-rise		Moon-rise set		Sun-rise		Moon-rise set			
																		90°	105°-120°
1 Wed.	m s	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
2 Thu.	2 54	2	4	6	5 17	6 37	6 25	8 28	5 10	6 45	6 15	8 39	5 04	6 54	6 33	8 51	4 50	7 5	5 49
3 Fri.	3 1	2	5	7	5 17	6 38	7 16	9 25	5 9	6 46	7 5	9 36	4 59	6 55	6 53	9 42	4 48	7 6	6 37
4 Sat.	3 8	3	5	7	5 16	6 38	8 12	10 20	5 7	6 47	8 1	10 30	4 58	6 56	7 49	10 42	4 47	7 8	7 34
5 Sun.	3 14	3	5	8	5 15	6 39	9 13	11 10	5 6	6 48	9 2	11 19	4 57	6 57	8 51	11 30	4 45	7 9	8 37
6 Mon.	3 19	3	5	8	5 14	6 40	10 15	11 56	5 5	6 48	10 7		4 56	6 58	9 57		4 44	7 10	9 46
7 Tue.	3 25	3	6	9	5 13	6 40	11 19		5 4	6 49	11 13	0 4	4 54	6 59	11 5	0 12	4 43	7 11	10 56
8 Wed.	3 29	3	6	9	5 12	6 41	12 23	0 40	5 3	6 50	12 19	0 45	4 53	7 0	12 14	0 51	4 41	7 13	12 8
9 Thu.	3 33	3	6	9	5 12	6 42	1 27	1 20	5 3	6 51	1 25	1 24	4 52	7 1	1 23	1 27	4 40	7 14	1 21
10 Fri.	3 36	3	6	9	5 11	6 42	2 30	2 0	5 2	6 52	2 32	2 0	4 51	7 2	2 33	2 1	4 39	7 15	2 34
11 Sat.	3 39	3	6	9	5 10	6 43	3 34	2 39	5 1	6 52	3 38	2 37	4 50	7 3	3 42	2 35	4 37	7 16	3 47
12 Sun.	3 42	3	6	9	5 9	6 44	4 38	3 20	5 0	6 53	4 45	3 15	4 49	7 4	4 51	3 10	4 36	7 17	5 0
13 Mon.	3 43	3	5	8	5 9	6 44	5 42	4 2	4 59	6 54	5 50	3 56	4 48	7 5	6 0	3 47	4 35	7 19	6 10
14 Tue.	3 44	3	5	8	5 8	6 45	6 43	4 48	4 58	6 55	6 54	4 39	4 47	7 6	7 5	4 28	4 34	7 20	7 18
15 Wed.	3 45	2	5	7	5 7	6 46	7 43	5 37	4 57	6 56	7 54	5 26	4 46	7 7	8 6	5 14	4 33	7 21	8 22
16 Thu.	3 45	2	4	6	5 7	6 46	8 38	6 28	4 57	6 56	8 49	6 16	4 45	7 8	9 3	6 4	4 31	7 22	9 18
17 Fri.	3 45	2	4	5	5 6	6 47	9 29	7 21	4 56	6 57	9 39	7 10	4 44	7 9	9 51	6 58	4 30	7 23	10 6
18 Sat.	3 44	2	3	5	5 6	6 48	10 14	8 16	4 55	6 58	10 23	8 6	4 43	7 10	10 34	7 54	4 29	7 24	10 46
19 Sun.	3 42	1	3	4	5 5	6 48	10 54	9 10	4 54	6 59	11 2	9 2	4 42	7 11	11 11	8 51	4 28	7 25	11 22
20 Mon.	3 40	1	3	4	5 4	6 49	11 31	10 5	4 54	7 0	11 38	9 57	4 42	7 12	11 44	9 49	4 27	7 27	11 53
21 Tue.	3 37	1	3	4	5 4	6 49		10 58	4 53	7 0		10 52	4 41	7 13		10 46	4 26	7 28	
22 Wed.	3 33	1	2	3	5 3	6 50	0	6 11	4 52	7 1	0 9	11 46	4 40	7 14	0 15	11 43	4 25	7 29	0 20
23 Thu.	3 30	1	2	3	5 3	6 51	0 38	12 42	4 52	7 2	0 40	12 41	4 39	7 15	0 43	12 40	4 24	7 30	0 46
24 Fri.	3 25	1	2	3	5 2	6 51	1 10	1 34	4 51	7 2	1 10	1 35	4 38	7 15	1 11	1 37	4 23	7 31	1 10
25 Sat.	3 20	1	2	4	5 2	6 52	1 43	2 27	4 51	7 3	1 40	2 31	4 38	7 16	1 38	2 34	4 22	7 32	1 35
26 Sun.	3 15	1	3	4	5 2	6 52	2 16	3 23	4 50	7 4	2 12	3 28	4 37	7 17	2 7	3 34	4 21	7 33	2 2
27 Mon.	3 8	1	3	4	5 1	6 53	2 53	4 19	4 50	7 5	2 47	4 26	4 36	7 18	2 39	4 35	4 21	7 34	2 32
28 Tue.	3 2	2	3	5	5 1	6 54	3 33	5 17	4 49	7 5	3 25	5 27	4 36	7 19	3 15	5 37	4 20	7 35	3 5
29 Wed.	2 55	2	4	6	5 1	6 54	4 17	6 16	4 49	7 6	4 8	6 27	4 35	7 20	3 56	6 40	4 19	7 36	3 43
30 Thu.	2 47	2	4	7	5 0	6 55	5	7 16	4 48	7 7	4 57	7 27	4 35	7 20	4 44	7 40	4 18	7 37	4 29
31 Fri.	2 39	3	5	7	5 0	6 55	6	8 13	4 48	7 7	5 52	8 23	4 34	7 21	5 39	8 36	4 18	7 38	5 25
	2 31	3	5	8	5 0	6 56	7	9 5	4 48	7 8	6 53	9 15	4 34	7 22	6 41	9 27	4 17	7 38	6 27

# JUNE 1957

	LOCAL CIVIL TIME Latitude 30° n.						LOCAL CIVIL TIME Latitude 35° n.						LOCAL CIVIL TIME Latitude 40° n.						LOCAL CIVIL TIME Latitude 45° n.						a-factor, moonrise 90° 105° 120°
	Sun fast	a-factor, moonrise			Sun	Moon- rise	Moon- set	Sun	Moon- rise	Moon- set	Sun	Moon- rise	Moon- set	Sun	Moon- rise	Moon- set	Sun	Moon- rise	Moon- set	Moon's upper transit					
		90°	105°	120°																					
June																									
1 Sat.	m s	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m				
2 Sun.	2 22	3	6	8	h	4 59	6 56	h	4 59	6 55	h	4 59	6 55	h	4 59	6 55	h	4 59	6 55	h	4 59				
3 Mon.	2 13	3	6	9	h	4 59	6 57	h	4 59	6 57	h	4 59	6 57	h	4 59	6 57	h	4 59	6 57	h	4 59				
4 Tue.	2 3	3	6	9	h	4 59	6 57	h	4 59	6 57	h	4 59	6 57	h	4 59	6 57	h	4 59	6 57	h	4 59				
5 Wed.	1 54	3	6	9	h	4 59	6 58	h	4 59	6 58	h	4 59	6 58	h	4 59	6 58	h	4 59	6 58	h	4 59				
6 Thu.	1 43	3	6	8	h	4 59	6 58	h	4 59	6 58	h	4 59	6 58	h	4 59	6 58	h	4 59	6 58	h	4 59				
7 Fri.	1 33	3	6	8	h	4 59	6 59	h	4 59	6 59	h	4 59	6 59	h	4 59	6 59	h	4 59	6 59	h	4 59				
8 Sat.	1 22	3	6	8	h	4 58	6 59	h	4 58	6 59	h	4 58	6 59	h	4 58	6 59	h	4 58	6 59	h	4 58				
9 Sun.	1 11	3	5	8	h	4 58	7 0	h	4 58	7 0	h	4 58	7 0	h	4 58	7 0	h	4 58	7 0	h	4 58				
10 Mon.	0 59	3	5	8	h	4 58	7 0	h	4 58	7 0	h	4 58	7 0	h	4 58	7 0	h	4 58	7 0	h	4 58				
11 Tue.	0 48	2	5	7	h	4 58	7 1	h	4 58	7 1	h	4 58	7 1	h	4 58	7 1	h	4 58	7 1	h	4 58				
12 Wed.	0 36	2	4	7	h	4 58	7 1	h	4 58	7 1	h	4 58	7 1	h	4 58	7 1	h	4 58	7 1	h	4 58				
13 Thu.	0 24	2	4	6	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58				
14 Fri.	0 12	2	3	5	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58				
15 Sat.	0 1	2	3	4	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58				
16 Sun.	0 13	1	3	4	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58	7 2	h	4 58				
17 Mon.	SLOW																								
18 Tue.	0 26	1	2	4	h	4 58	7 3	h	4 58	7 3	h	4 58	7 3	h	4 58	7 3	h	4 58	7 3	h	4 58				
19 Wed.	0 39	1	2	3	h	4 59	7 3	h	4 59	7 3	h	4 59	7 3	h	4 59	7 3	h	4 59	7 3	h	4 59				
20 Thu.	0 52	1	2	3	h	4 59	7 3	h	4 59	7 3	h	4 59	7 3	h	4 59	7 3	h	4 59	7 3	h	4 59				
21 Fri.	1 5	1	2	3	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59				
22 Sat.	1 18	1	2	3	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59				
23 Sun.	1 31	1	2	4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59				
24 Mon.	1 44	1	3	4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59	7 4	h	4 59				
25 Tue.	1 57	2	3	5	h	5 0	7 4	h	5 0	7 4	h	5 0	7 4	h	5 0	7 4	h	5 0	7 4	h	5 0				
26 Wed.	2 10	2	4	5	h	5 0	7 5	h	5 0	7 5	h	5 0	7 5	h	5 0	7 5	h	5 0	7 5	h	5 0				
27 Thu.	2 23	2	4	6	h	5 0	7 5	h	5 0	7 5	h	5 0	7 5	h	5 0	7 5	h	5 0	7 5	h	5 0				
28 Fri.	2 35	2	5	7	h	5 1	7 5	h	5 1	7 5	h	5 1	7 5	h	5 1	7 5	h	5 1	7 5	h	5 1				
29 Sat.	2 48	3	5	8	h	5 1	7 5	h	5 1	7 5	h	5 1	7 5	h	5 1	7 5	h	5 1	7 5	h	5 1				
30 Sun.	3 1	3	6	9	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2				
	3 13	3	6	9	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2				
	3 25	3	6	9	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2	7 5	h	5 2				

# JULY 1957

July	Sun slow	LOCAL CIVIL TIME Latitude 30° n.			LOCAL CIVIL TIME Latitude 35° n.			LOCAL CIVIL TIME Latitude 40° n.			LOCAL CIVIL TIME Latitude 45° n.			a-factor, moonrise		
		m	s	90°	Sun rise	Sun set	Moon rise	Moon set	Sun rise	Sun set	Moon rise	Moon set	Moon's upper transit	90°	105°	120°
1 Mon.	3 37	3	6	9	5 2	7 5	9 11	10 1	4 49	7 18	9 7	10 4	h m	1	m	m
2 Tue.	3 49	3	6	9	5 3	7 5	10 16	10 41	4 50	7 18	10 15	11 4	h m	1	3	4
3 Wed.	4 0	3	6	8	5 3	7 5	11 20	11 20	4 50	7 18	11 22	11 8	h m	1	3	4
4 Thu.	4 11	3	6	8	5 3	7 5	12 23	.....	4 51	7 18	12 27	11 55	h m	2	3	5
5 Fri.	4 22	3	5	8	5 4	7 5	1 25	0 1	4 51	7 18	1 31	.....	h m	2	3	5
6 Sat.	4 32	3	5	8	5 4	7 5	2 25	0 27	4 52	7 17	2 34	0 35	h m	2	3	5
7 Sun.	4 42	3	5	7	5 5	7 5	3 25	1 42	4 52	7 17	3 35	1 18	h m	2	4	5
8 Mon.	4 51	2	5	7	5 5	7 4	4 21	2 14	4 53	7 17	4 32	2 4	h m	2	4	6
9 Tue.	5 1	2	4	6	5 6	7 4	5 14	3 5	4 53	7 17	5 25	2 54	h m	2	4	6
10 Wed.	5 9	2	4	5	5 6	7 4	6 2	3 57	4 54	7 16	6 13	3 46	h m	2	5	7
11 Thu.	5 18	2	3	5	5 7	7 4	6 47	4 51	4 55	7 16	6 56	4 42	h m	2	5	7
12 Fri.	5 26	1	3	4	5 7	7 4	7 27	5 46	4 56	7 15	7 35	5 38	h m	2	5	7
13 Sat.	5 33	1	3	4	5 8	7 3	8 4	6 40	4 56	7 15	8 10	6 33	h m	2	5	7
14 Sun.	5 40	1	2	3	5 8	7 3	8 38	7 33	4 56	7 15	8 42	7 28	h m	2	5	7
15 Mon.	5 46	1	2	3	5 9	7 3	9 11	8 26	4 57	7 14	9 13	8 22	h m	2	5	7
16 Tue.	5 52	1	2	3	5 9	7 2	9 43	9 18	4 58	7 14	9 42	9 17	h m	2	5	7
17 Wed.	5 58	1	2	3	5 10	7 2	10 15	10 10	4 58	7 14	10 12	10 10	h m	2	5	7
18 Thu.	6 3	1	3	4	5 11	7 2	10 47	11 2	4 59	7 13	10 44	11 5	h m	2	5	7
19 Fri.	6 7	1	3	4	5 11	7 1	11 23	11 55	5 0	7 12	11 17	12 1	h m	2	5	7
20 Sat.	6 11	2	3	5	5 12	7 1	.....	12 50	5 0	7 12	11 55	12 57	h m	3	5	7
21 Sun.	6 15	2	3	5	5 12	7 0	0 2	1 47	5 1	7 11	.....	1 55	h m	3	5	7
22 Mon.	6 18	2	4	6	5 13	7 0	0 46	2 44	5 2	7 11	0 37	2 55	h m	3	5	7
23 Tue.	6 22	2	4	7	5 13	6 59	1 35	3 43	5 2	7 10	1 24	3 54	h m	3	5	7
24 Wed.	6 22	3	5	8	5 14	6 59	2 30	4 39	5 3	7 9	2 20	4 50	h m	3	5	7
25 Thu.	6 23	3	6	8	5 15	6 58	3 32	5 34	5 4	7 9	3 22	5 43	h m	3	5	7
26 Fri.	6 23	3	6	9	5 15	6 57	4 37	6 25	5 5	7 8	4 28	6 33	h m	4	6	6
27 Sat.	6 24	3	6	9	5 16	6 57	5 45	7 12	5 5	7 7	5 38	7 18	h m	4	5	5
28 Sun.	6 23	3	6	9	5 16	6 56	6 53	7 57	5 6	7 6	6 49	7 59	h m	4	5	5
29 Mon.	6 22	3	6	9	5 17	6 56	8 2	8 39	5 7	7 6	8 0	8 39	h m	4	5	5
30 Tue.	6 20	3	6	9	5 18	6 55	9 8	9 20	5 8	7 5	9 9	9 17	h m	4	5	5
31 Wed.	6 18	3	6	9	5 18	6 54	10 13	10 1	5 8	7 4	10 17	9 55	h m	4	5	5



# AUGUST 1957

Aug.	Sun slow	LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				Moon's upper transit	a-factor, moonset						
		Sun	rise	set	Moon- rise	Moon- set	Sun	rise	set	Moon- rise	Moon- set	Sun	rise	set	Moon- rise	Moon- set	Moon's upper transit		90°	105°	120°				
1 Thu.	m s	6 14	m	5 19	6 53	11 17	10 42	h m	h m	5 09	7 3	11 23	10 36	h m	h m	4 58	7 14	11 30	10 27	h m	h m	4 56	m	3	5
2 Fri.	6 11	3	5 19	6 53	12 19	11 27	5 10	7 2	12 27	11 17	5 0	7 13	12 36	11 8	4 46	7 26	12 47	10 56	5 49	2	4	5	m	2	4
3 Sat.	6 7	5	5 20	6 52	1 19	1 29	5 11	7 1	1 29	1 17	5 0	7 12	1 40	11 52	4 47	7 24	1 53	11 38	6 42	2	4	6	m	2	4
4 Sun.	6 2	7	5 20	6 51	2 16	0 13	5 11	7 0	2 27	0 3	5 1	7 11	2 40	12 04	4 48	7 23	2 55	11 38	7 34	2	4	6	m	2	4
5 Mon.	5 56	2	5 21	6 50	3 10	1 3	5 12	6 59	3 21	0 52	5 2	7 10	3 34	12 09	4 49	7 22	3 40	0 24	8 27	2	4	6	m	2	4
6 Tue.	5 50	2	5 22	6 50	4 0	1 54	5 13	6 58	4 10	1 43	5 3	7 9	4 23	1 30	4 51	7 20	4 37	1 15	9 17	2	4	7	m	2	4
7 Wed.	5 43	2	5 22	6 49	4 45	2 47	5 14	6 57	4 55	2 36	5 4	7 7	5 6	2 25	4 52	7 19	5 19	2 10	10 7	2	5	7	m	2	5
8 Thu.	5 36	1	5 23	6 48	5 26	3 40	5 15	6 56	5 35	3 31	5 5	7 6	5 44	3 21	4 53	7 18	5 56	3 8	10 54	2	5	7	m	2	5
9 Fri.	5 28	1	5 24	6 47	6 4	4 34	5 16	6 55	6 11	4 26	5 5	7 5	6 18	4 18	4 54	7 16	6 27	4 7	11 40	2	5	7	m	2	5
10 Sat.	5 19	1	5 24	6 46	6 39	5 28	5 16	6 54	6 44	5 21	5 6	7 4	6 49	5 15	4 55	7 15	6 56	5 7	11 40	2	5	7	m	2	5
11 Sun.	5 10	1	5 25	6 45	7 13	6 20	5 17	6 53	7 15	6 16	5 7	7 2	7 19	6 12	4 56	7 13	7 22	6 7	0 23	2	5	7	m	2	5
12 Mon.	5 1	2	5 25	6 44	7 45	7 12	5 17	6 52	7 45	7 10	5 8	7 1	7 46	7 9	4 58	7 12	7 47	7 6	1 6	2	5	7	m	2	5
13 Tue.	4 50	1	5 26	6 43	8 17	8 4	5 18	6 51	8 15	8 4	5 9	7 0	8 14	8 5	4 59	7 10	8 11	8 5	1 47	2	5	7	m	2	5
14 Wed.	4 40	1	5 27	6 42	8 49	8 56	5 19	6 50	8 46	8 58	5 10	6 58	8 41	9 1	5 0	7 9	8 37	9 4	2 29	2	5	7	m	2	5
15 Thu.	4 28	1	5 27	6 41	9 23	9 48	5 20	6 49	9 18	9 53	5 11	6 57	9 12	9 58	5 1	7 7	9 4	10 4	3 12	2	5	7	m	2	5
16 Fri.	4 16	2	5 28	6 40	10 0	10 41	5 20	6 48	9 53	10 49	5 12	6 56	9 44	10 56	5 2	7 5	9 35	11 5	3 55	2	5	7	m	2	5
17 Sat.	4 4	2	5 28	6 39	10 41	11 37	5 21	6 46	10 32	11 45	5 13	6 54	10 22	11 54	5 4	7 4	10 10	12 6	4 41	2	5	7	m	2	5
18 Sun.	3 51	2	5 29	6 38	11 26	12 33	5 22	6 45	11 15	12 42	5 14	6 53	11 4	12 53	5 5	7 2	10 51	1 6	5 30	2	5	7	m	2	5
19 Mon.	3 38	2	5 29	6 37	12 0	1 29	5 23	6 44	11 0	1 40	5 15	6 52	11 53	1 52	5 6	7 0	11 39	2 6	6 21	2	5	7	m	2	5
20 Tue.	3 24	3	5 30	6 36	0 18	2 24	5 23	6 43	0 7	2 35	5 16	6 50	12 0	2 48	5 7	6 59	3 2	7 15	7 15	2	4	7	m	2	4
21 Wed.	3 10	3	5 31	6 35	1 15	3 19	5 24	6 42	1 4	3 30	5 17	6 49	0 51	3 41	5 8	6 57	0 36	3 55	8 12	2	4	6	m	2	4
22 Thu.	2 55	3	5 31	6 34	2 17	4 11	5 25	6 40	2 7	4 20	5 18	6 47	1 55	4 30	5 10	6 55	1 42	4 42	9 9	2	4	6	m	2	4
23 Fri.	2 40	3	5 32	6 33	3 22	5 0	5 26	6 39	3 14	5 7	5 19	6 46	3 5	5 15	5 11	6 54	2 54	5 24	10 8	2	3	5	m	2	3
24 Sat.	2 24	3	5 32	6 32	4 30	5 46	5 26	6 38	4 24	5 51	5 20	6 44	4 17	5 56	5 12	6 52	4 9	6 1	11 5	2	3	5	m	2	3
25 Sun.	2 8	3	5 33	6 31	5 39	6 30	5 27	6 36	5 36	6 31	5 21	6 43	5 32	6 34	5 13	6 50	5 27	6 36	12 2	2	3	5	m	2	3
26 Mon.	1 52	3	5 33	6 30	6 47	7 13	5 28	6 35	6 47	7 11	5 22	6 41	6 46	7 11	5 14	6 48	6 46	7 10	12 58	2	3	5	m	2	3
27 Tue.	1 35	3	5 34	6 29	7 56	7 55	5 29	6 34	7 58	7 51	5 23	6 40	8 0	7 48	5 16	6 47	8 3	7 43	1 52	2	3	5	m	2	3
28 Wed.	1 18	3	5 35	6 27	9 3	8 38	5 29	6 33	9 7	8 32	5 24	6 38	9 13	8 25	5 17	6 45	9 19	8 18	2 47	2	3	5	m	2	3
29 Thu.	1 0	3	5 35	6 26	10 7	9 33	5 30	6 31	10 15	9 15	5 24	6 37	10 23	9 6	5 18	6 43	10 33	8 55	3 41	2	4	5	m	2	4
30 Fri.	0 43	3	5 36	6 25	11 10	10 10	5 31	6 30	11 19	10 0	5 25	6 35	11 29	9 50	5 19	6 41	11 42	9 36	4 36	2	4	6	m	2	4
31 Sat.	0 24	2	5 36	6 24	12 10	10 59	5 32	6 28	12 20	10 49	5 26	6 34	12 32	10 36	5 20	6 40	12 45	10 22	5 30	2	4	6	m	2	4

# SEPTEMBER 1957

Sept.	LOCAL CIVIL TIME Latitude 30° n.		LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonset			
	Sun fast	Sun- rise	Sun- set	Moon- rise	Moon- set	Sun- rise	Sun- set	Moon- rise	Moon- set	Sun- rise	Sun- set	Moon- rise	Moon- set	Moon's upper transit	90°	105°	120°	
1 Sun.	m s	5 37	6 23	1 6	11 50	5 32	6 27	1 16	11 40	5 27	6 32	1 29	11 27	5 22	6 38	h m	m	m
2 Mon.	+0 13	6 2	6 37	1 57	11 50	5 33	6 26	2 8	11 40	5 28	6 30	2 20	11 27	5 23	6 36	h m	m	m
3 Tue.	0 33	6 22	6 41	2 44	0 43	5 34	6 24	2 54	0 32	5 29	6 29	3 5	0 20	5 24	6 34	h m	m	m
4 Wed.	0 52	6 2	6 38	3 26	1 36	5 35	6 23	3 35	1 27	5 30	6 27	3 44	1 16	5 25	6 32	h m	m	m
5 Thu.	1 12	6 3	6 39	4 5	2 30	5 35	6 22	4 12	2 22	5 31	6 26	4 20	2 13	5 26	6 30	h m	m	m
6 Fri.	1 32	6 4	6 40	4 41	3 23	5 36	6 20	4 46	3 17	5 32	6 24	4 52	3 10	5 27	6 29	h m	m	m
7 Sat.	1 52	6 5	6 40	5 15	4 16	5 37	6 19	5 17	4 11	5 33	6 22	5 22	4 7	5 29	6 27	h m	m	m
8 Sun.	2 13	6 6	6 41	5 47	5 8	5 38	6 17	5 48	5 5	5 34	6 21	5 50	5 3	5 30	6 25	h m	m	m
9 Mon.	2 33	6 7	6 42	6 19	6 0	5 38	6 16	6 18	5 59	5 35	6 19	6 18	5 59	5 31	6 23	h m	m	m
10 Tue.	2 54	6 8	6 42	6 52	6 52	5 39	6 15	6 49	6 53	5 36	6 18	6 45	6 56	5 32	6 21	h m	m	m
11 Wed.	3 15	6 9	6 42	7 25	7 44	5 40	6 13	7 21	7 47	5 37	6 16	7 15	7 52	5 33	6 19	h m	m	m
12 Thu.	3 36	6 10	6 43	8 1	8 37	5 40	6 12	7 55	8 43	5 38	6 14	7 47	8 43	5 35	6 17	h m	m	m
13 Fri.	3 57	6 11	6 43	8 41	9 30	5 41	6 10	8 32	9 39	5 39	6 13	8 23	9 47	5 36	6 15	h m	m	m
14 Sat.	4 19	6 12	6 44	9 24	10 25	5 42	6 9	9 14	10 35	5 40	6 11	9 2	10 45	5 37	6 13	h m	m	m
15 Sun.	4 40	6 13	6 44	10 12	11 20	5 43	6 7	10 1	11 31	5 41	6 9	9 48	11 43	5 38	6 12	h m	m	m
16 Mon.	5 1	6 14	6 45	11 4	12 15	5 43	6 6	10 54	12 26	5 42	6 8	10 41	12 38	5 39	6 10	h m	m	m
17 Tue.	5 22	6 15	6 45	6 3	1 9	5 44	6 5	11 52	1 19	5 42	6 6	11 40	1 31	5 41	6 8	h m	m	m
18 Wed.	5 44	6 16	6 46	6 2	2 0	5 45	6 3	1 54	2 9	5 43	6 4	1 20	2 20	5 42	6 6	h m	m	m
19 Thu.	6 5	6 17	6 46	6 1	2 49	5 46	6 2	0 55	2 56	5 44	6 4	0 44	3 5	5 43	6 4	h m	m	m
20 Fri.	6 26	6 18	6 47	6 0	3 34	5 46	6 0	2 1	3 41	5 45	6 1	1 54	3 46	5 44	6 2	h m	m	m
21 Sat.	6 47	6 19	6 48	5 58	4 19	5 47	5 59	3 11	4 22	5 46	5 59	3 5	4 26	5 45	6 0	h m	m	m
22 Sun.	7 8	6 20	6 49	5 57	4 23	5 48	5 57	4 21	5 2	5 47	5 58	4 19	5 3	5 47	5 58	h m	m	m
23 Mon.	7 29	6 21	6 50	5 56	5 31	5 48	5 56	5 33	5 43	5 48	5 56	5 33	5 40	5 48	5 56	h m	m	m
24 Tue.	7 50	6 22	6 51	6 40	6 28	5 49	5 55	6 44	6 24	5 49	5 54	6 47	6 18	5 49	5 54	h m	m	m
25 Wed.	8 11	6 23	6 52	7 47	7 14	5 50	5 53	7 53	7 6	5 50	5 53	8 0	6 59	5 50	5 52	h m	m	m
26 Thu.	8 31	6 24	6 53	8 53	8 1	5 51	5 52	9 2	7 52	5 51	5 51	9 10	7 43	5 51	5 51	h m	m	m
27 Fri.	8 52	6 25	6 54	9 56	8 51	5 51	5 50	10 7	8 41	5 52	5 49	10 18	8 29	5 53	5 49	h m	m	m
28 Sat.	9 12	6 26	6 55	10 55	9 43	5 52	5 49	11 6	9 32	5 53	5 48	11 20	9 20	5 54	5 47	h m	m	m
29 Sun.	9 32	6 27	6 56	11 50	10 37	5 53	5 46	12 0	10 26	5 54	5 46	12 13	10 14	5 55	5 45	h m	m	m
30 Mon.	9 52	6 28	6 57	12 39	11 31	5 54	5 47	12 49	11 21	5 55	5 45	1 1	11 10	5 56	5 43	h m	m	m

# OCTOBER 1957

Oct.	LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonrise 90°	a-factor, moonset 105° 120°	
	Sun fast	Sun- rise	Moon- rise	Moon- set	Sun- rise	Moon- rise	Moon- set	Sun- rise	Moon- rise	Moon- set	Sun- rise	Moon- rise	Moon- set	Moon's upper transit	90°	105°		120°	
1 Tue.	m s	5 53	5 46	h m	5 54	5 44	1 33	h m	5 56	5 43	1 44	h m	5 58	5 41	1 55	h m	m	m	
2 Wed.	10 11	5 54	5 45	0 25	5 55	5 43	2 11	0 16	5 57	5 41	2 20	0 7	5 59	5 39	2 31	6 48	2	5	
3 Thu.	10 30	5 54	5 43	1 18	5 56	5 42	2 47	1 11	5 58	5 40	2 53	1 4	6 0	5 37	3 2	8 20	2	7	
4 Fri.	10 49	5 55	5 42	2 11	5 57	5 40	3 19	2 0	5 59	5 38	3 24	2 0	6 1	5 36	3 29	9 34	2	7	
5 Sat.	11 8	5 55	5 41	3 49	5 58	5 39	3 50	3 6	6 0	5 36	3 53	2 57	6 3	5 34	3 55	9 45	2	7	
6 Sun.	11 26	5 56	5 40	3 55	5 58	5 38	4 20	3 54	6 1	5 35	4 21	3 53	6 4	5 32	4 20	3 51	10 27	2	
7 Mon.	11 44	5 57	5 39	4 53	5 59	5 36	4 51	4 47	6 2	5 33	4 49	4 49	6 5	5 30	4 46	4 50	11 9	2	
8 Tue.	12 2	5 57	5 38	5 27	6 0	5 35	5 23	5 42	6 3	5 32	5 18	5 46	6 6	5 28	5 13	5 50	11 52	2	
9 Wed.	12 19	5 58	5 36	6 3	6 1	5 33	5 56	6 38	6 4	5 30	5 49	6 43	6 8	5 26	5 41	6 50	.....	2	
10 Thu.	12 36	5 58	5 35	6 32	6 2	5 32	6 33	7 34	6 5	5 29	6 24	7 41	6 9	5 25	6 13	7 51	0 37	2	
11 Fri.	12 52	5 59	5 34	7 26	6 2	5 31	7 13	8 30	6 6	5 27	7 3	8 40	6 10	5 23	6 51	8 51	1 24	2	
12 Sat.	13 8	6 0	5 33	8 21	6 3	5 29	7 59	9 26	6 7	5 26	7 47	9 38	6 11	5 21	7 33	9 51	2 13	2	
13 Sun.	13 23	6 0	5 32	9 9	6 4	5 28	8 49	10 21	6 8	5 24	8 37	10 33	6 13	5 19	8 22	11 40	3 4	2	
14 Mon.	13 38	6 1	5 31	9 55	6 5	5 27	9 44	11 14	6 9	5 23	9 32	11 26	6 14	5 18	9 19	12 47	3 56	2	
15 Tue.	13 52	6 2	5 30	10 54	6 6	5 26	10 44	12 4	6 10	5 21	10 34	12 16	6 15	5 16	10 21	12 28	4 50	2	
16 Wed.	14 6	6 2	5 29	11 54	6 7	5 24	11 46	12 51	6 11	5 20	11 39	1 1	6 17	5 14	11 29	1 11	5 44	2	
17 Thu.	14 19	6 3	5 28	12 43	6 7	5 23	1 35	1 35	6 12	5 18	.....	1 42	6 18	5 12	1 50	6 38	2	3	
18 Fri.	14 32	6 3	5 26	0 59	6 8	5 22	0 53	2 15	6 13	5 17	0 47	2 20	6 19	5 11	0 39	2 26	7 32	2	
19 Sat.	14 44	6 4	5 25	2 4	6 9	5 21	2 0	2 55	6 14	5 15	1 57	2 57	6 21	5 9	1 53	2 59	8 26	2	
20 Sun.	14 55	6 4	5 24	3 10	6 10	5 19	3 9	3 34	6 15	5 14	3 8	3 33	6 22	5 7	3 8	3 32	9 20	2	
21 Mon.	15 6	6 5	5 24	3 35	6 11	5 18	4 19	4 14	6 17	5 12	4 21	4 10	6 23	5 6	4 24	4 5	10 14	2	
22 Tue.	15 16	6 6	5 23	4 16	6 12	5 17	5 28	4 55	6 18	5 11	5 34	4 49	6 25	5 4	5 40	4 11	9 2	3	
23 Wed.	15 25	6 6	5 22	5 24	6 13	5 16	6 37	5 40	6 19	5 10	6 46	5 31	6 26	5 2	6 55	5 21	12 5	2	
24 Thu.	15 34	6 7	5 21	6 31	6 13	5 15	7 46	6 29	6 20	5 8	7 56	6 17	6 27	5 1	8 7	6 5	1 2	2	
25 Fri.	15 42	6 8	5 20	7 36	6 14	5 14	8 49	7 20	6 21	5 7	9 2	7 8	6 28	4 59	9 16	6 54	1 59	2	
26 Sat.	15 49	6 8	5 19	8 38	6 15	5 12	9 48	7 20	6 21	5 7	9 2	7 8	6 28	4 59	9 16	6 54	1 59	2	
27 Sun.	15 56	6 9	5 18	9 37	6 15	5 12	9 48	8 15	6 22	5 6	10 1	8 2	6 30	4 58	10 16	7 48	2 56	2	
28 Mon.	16 2	6 10	5 17	10 30	6 16	5 11	10 41	9 11	6 23	5 4	10 53	8 59	6 31	4 56	11 8	8 45	3 50	2	
29 Tue.	16 7	6 11	5 16	11 18	6 17	5 10	11 28	10 7	6 24	5 3	11 39	9 56	6 33	4 55	11 51	9 44	4 41	2	
30 Wed.	16 12	6 11	5 16	12 1	6 18	5 9	12 9	11 3	6 25	5 2	12 18	10 54	6 34	4 53	12 29	10 44	5 29	2	
31 Thu.	16 15	6 12	5 15	12 39	6 19	5 8	12 46	11 58	6 26	5 0	12 54	11 52	6 35	4 52	1 2	11 44	6 15	2	
1 Thu.	16 18	6 13	5 14	1 15	6 20	5 7	1 20	.....	6 28	4 59	1 19	.....	6 37	4 50	1 32	.....	6 59	2	



# NOVEMBER 1957

Nov.	Sun fast	LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonset		
		m	s	90°	105°	120°	Sun rise	Sun set	Moon rise	Moon set	Sun rise	Sun set	Moon rise	Moon set	Sun rise	Sun set	Moon upper transit	90°	105°	120°
1 Fri.	16 21	1	2	3	m	m	6 14	5 13	1 49	0 57	h	m	5 6	1 51	0 52	h	m	4 58	1 54	0 49
2 Sat.	16 22	1	2	3	m	m	6 15	5 12	2 21	1 48	6 22	5 5	2 21	1 46	6 30	4 57	2 23	1 45	6 39	2 45
3 Sun.	16 23	1	2	3	m	m	6 15	5 12	2 54	2 40	6 23	5 4	2 52	2 21	6 31	4 56	2 50	2 41	6 41	2 57
4 Mon.	16 22	1	2	3	m	m	6 16	5 11	3 26	3 32	6 24	5 3	3 23	3 34	6 32	4 55	3 19	3 37	6 42	2 57
5 Tue.	16 22	1	2	4	m	m	6 17	5 10	4 2	4 25	6 25	5 2	3 56	4 30	6 33	4 53	3 50	4 35	6 44	2 57
6 Wed.	16 20	1	3	4	m	m	6 18	5 10	4 39	5 15	6 26	5 2	4 32	5 26	6 35	4 52	4 24	5 33	6 45	2 57
7 Thu.	16 17	2	3	5	m	m	6 18	5 9	5 20	6 15	6 26	5 1	5 12	6 23	6 36	4 51	5 2	6 32	6 46	2 57
8 Fri.	16 14	2	4	6	m	m	6 19	5 8	6 7	7 10	6 27	5 0	5 56	7 20	6 37	4 50	5 44	7 3	6 48	2 57
9 Sat.	16 9	2	4	7	m	m	6 20	5 8	6 56	8 5	6 28	4 59	6 45	8 16	6 38	4 49	6 33	8 28	6 49	2 57
10 Sun.	16 4	2	5	7	m	m	6 21	5 7	7 51	9 0	6 29	4 58	7 40	9 11	6 39	4 48	7 28	9 23	6 50	2 57
11 Mon.	15 58	2	5	7	m	m	6 22	5 6	8 48	9 52	6 30	4 57	8 39	10 2	6 40	4 48	8 27	10 14	6 52	2 57
12 Tue.	15 51	3	6	8	m	m	6 22	5 6	9 49	10 41	6 31	4 57	9 40	10 49	6 41	4 47	9 31	11 0	6 53	2 57
13 Wed.	15 44	3	6	9	m	m	6 23	5 5	10 51	11 26	6 32	4 56	10 45	11 34	6 43	4 46	10 37	11 42	6 55	2 57
14 Thu.	15 35	3	6	9	m	m	6 24	5 5	11 53	12 10	6 33	4 55	11 50	12 14	6 44	4 45	11 45	12 20	6 56	2 57
15 Fri.	15 25	3	6	9	m	m	6 25	5 4	.....	12 50	6 34	4 55	.....	12 53	6 45	4 44	.....	12 56	6 57	2 57
16 Sat.	15 15	3	6	9	m	m	6 26	5 4	0 57	1 30	6 35	4 54	0 56	1 31	6 46	4 43	0 53	1 31	6 59	2 57
17 Sun.	15 4	3	6	9	m	m	6 27	5 3	2 1	2 11	6 36	4 54	2 2	2 8	6 47	4 42	2 3	2 6	7 0	2 57
18 Mon.	14 52	3	6	9	m	m	6 27	5 3	3 6	2 53	6 37	4 53	3 9	2 48	6 48	4 42	3 13	2 43	7 1	2 57
19 Tue.	14 39	3	6	9	m	m	6 28	5 2	4 11	3 37	6 38	4 52	4 17	3 30	6 50	4 41	4 24	3 22	7 3	2 57
20 Wed.	14 25	3	6	8	m	m	6 29	5 2	5 16	4 24	6 39	4 52	5 24	4 16	6 51	4 40	5 33	4 6	7 4	2 57
21 Thu.	14 11	3	5	8	m	m	6 30	5 2	6 20	5 15	6 40	4 51	6 29	5 5	6 52	4 40	6 40	4 54	7 5	2 57
22 Fri.	13 55	2	5	7	m	m	6 31	5 1	7 21	6 10	6 41	4 51	7 31	5 59	6 53	4 39	7 43	5 47	7 7	2 57
23 Sat.	13 39	2	4	6	m	m	6 32	5 1	8 17	7 6	6 42	4 51	8 28	6 55	6 54	4 39	8 41	6 43	7 8	2 57
24 Sun.	13 22	2	4	5	m	m	6 32	5 1	9 9	8 3	6 43	4 50	9 19	7 53	6 55	4 38	9 30	7 41	7 9	2 57
25 Mon.	13 5	2	3	5	m	m	6 33	5 1	9 55	8 58	6 44	4 50	10 4	8 50	6 56	4 38	10 13	8 40	7 10	2 57
26 Tue.	12 46	1	3	4	m	m	6 34	5 0	10 36	9 53	6 45	4 50	10 43	9 47	6 57	4 37	10 51	9 39	7 12	2 57
27 Wed.	12 27	1	3	4	m	m	6 35	5 0	11 13	10 47	6 46	4 49	11 19	10 42	6 58	4 37	11 24	10 37	7 13	2 57
28 Thu.	12 7	1	2	4	m	m	6 36	5 0	11 48	11 40	6 47	4 49	11 51	11 37	6 59	4 36	11 55	11 34	7 14	2 57
29 Fri.	11 46	1	2	3	m	m	6 36	5 0	12 21	.....	6 48	4 49	12 22	.....	7 0	4 36	12 23	.....	7 15	2 57
30 Sat.	11 25	1	2	3	m	m	6 37	5 0	12 53	0 32	6 49	4 49	12 52	0 31	7 1	4 36	12 52	0 31	7 17	2 57

# DECEMBER 1957

Dec.	Sun fast	LOCAL CIVIL TIME Latitude 30° n.				LOCAL CIVIL TIME Latitude 35° n.				LOCAL CIVIL TIME Latitude 40° n.				LOCAL CIVIL TIME Latitude 45° n.				a-factor, moonset		Moon's upper transit
		a-factor, moonrise		Sun- rise	Sun- set	Moon- rise	Moon- set	Sun- rise	Sun- set	Moon- rise	Moon- set	Sun- rise	Sun- set	Moon- rise	Moon- set					
		90°	105°													120°				
1 Sun.	m s	m	m	m	m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	m	m	m
2 Mon.	11 3	1 2	4	6 38	5 0	1 23	1 24	6 49	4 49	1 23	1 24	7 2	4 35	1 20	1 27	7 18	4 20	1 17	1 28	7 43
3 Tue.	10 41	1 3	4	6 39	5 0	1 59	2 15	6 50	4 48	1 55	2 19	7 3	4 35	1 50	2 23	7 19	4 20	1 17	2 28	8 27
4 Wed.	10 18	1 3	4	6 40	5 0	2 36	3 8	6 51	4 48	2 29	3 15	7 4	4 35	2 22	3 21	7 20	4 19	2 14	3 29	9 12
5 Thu.	9 54	2 3	5	6 40	5 0	3 16	4 4	6 52	4 48	3 8	4 11	7 5	4 35	2 58	4 19	7 21	4 19	2 47	4 30	10 6
6 Fri.	9 30	2 4	6	6 41	5 0	4 0	5 0	6 53	4 48	3 50	5 9	7 6	4 35	3 38	5 19	7 22	4 19	3 25	5 31	10 51
7 Sat.	9 5	2 4	6	6 42	5 0	4 48	5 56	6 54	4 48	4 38	6 6	7 7	4 35	4 26	6 18	7 23	4 19	4 11	6 31	11 44
8 Sun.	8 39	2 5	7	6 43	5 0	5 42	6 52	6 55	4 48	5 32	7 2	7 8	4 35	5 19	7 15	7 24	4 19	5 5	7 29	12 4
9 Mon.	7 47	3 5	8	6 43	5 0	6 40	7 46	6 55	4 48	6 30	7 57	7 9	4 35	6 18	8 8	7 25	4 18	6 5	8 22	0 39
10 Tue.	7 20	3 5	8	6 44	5 0	7 41	8 37	6 56	4 48	7 32	8 47	7 10	4 35	7 23	8 57	7 26	4 18	7 20	9 10	1 35
11 Wed.	6 53	3 6	8	6 45	5 1	8 44	9 25	6 57	4 49	8 37	9 33	7 11	4 35	8 29	9 42	7 27	4 18	8 20	9 52	2 30
12 Thu.	6 25	3 6	8	6 46	5 1	9 47	10 10	6 58	4 49	9 43	10 15	7 12	4 35	9 37	10 22	7 28	4 18	9 31	10 30	3 24
13 Fri.	5 57	3 6	8	6 46	5 1	10 50	10 51	6 58	4 49	10 48	10 55	7 12	4 35	10 45	10 59	7 29	4 19	10 42	11 4	4 17
14 Sat.	5 29	3 6	8	6 47	5 1	11 53	11 31	6 59	4 49	11 54	11 33	7 13	4 35	11 53	11 34	7 30	4 19	11 54	11 35	5 6
15 Sun.	5 0	3 6	8	6 48	5 2	12 10	12 10	7 0	4 50	12 10	12 10	7 14	4 35	12 8	12 8	7 31	4 19	12 6	12 6	6 0
16 Mon.	4 31	3 6	8	6 48	5 2	0 56	12 51	7 0	4 50	0 59	12 47	7 15	4 36	1 2	12 43	7 31	4 19	1 6	12 38	6 51
17 Tue.	4 2	3 6	8	6 49	5 2	1 59	1 33	7 1	4 50	2 5	1 27	7 15	4 36	2 10	1 20	7 32	4 19	2 17	1 12	7 43
18 Wed.	3 32	3 5	8	6 50	5 3	3 3	2 18	7 2	4 50	3 10	2 9	7 16	4 36	3 18	2 0	7 33	4 20	3 28	1 50	8 36
19 Thu.	3 3	3 5	8	6 51	5 4	5 6	3 57	7 3	4 51	4 14	2 55	7 17	4 37	4 25	2 45	7 33	4 20	4 37	2 32	9 31
20 Fri.	2 33	2 4	7	6 51	5 4	6 4	4 52	7 3	4 52	6 14	4 41	7 18	4 37	6 27	4 29	7 34	4 20	5 44	3 20	10 27
21 Sat.	2 3	2 4	6	6 52	5 4	6 57	5 48	7 4	4 52	7 8	5 38	7 18	4 38	7 20	5 26	7 35	4 21	7 35	5 12	11 22
22 Sun.	1 33	2 3	5	6 52	5 4	7 46	6 45	7 4	4 52	7 56	6 36	7 18	4 38	8 7	6 25	7 35	4 21	8 19	6 13	12 17
23 Mon.	1 3	2 3	4	6 53	5 6	8 30	7 41	7 5	4 53	8 38	7 34	7 19	4 39	8 47	7 25	7 36	4 22	8 58	7 15	1 59
24 Tue.	0 33	1 3	4	6 53	5 6	9 10	8 36	7 6	4 54	9 16	8 30	7 20	4 39	9 23	8 24	7 37	4 23	9 31	8 17	2 46
25 Wed.	0 3	1 2	4	6 54	5 7	9 46	9 29	7 6	4 54	9 50	9 25	7 20	4 40	9 55	9 22	7 37	4 23	10 1	9 17	3 31
26 Thu.	SLOW	1	2	6 54	5 7	10 20	10 22	7 6	4 55	10 22	10 20	7 20	4 41	10 25	10 19	7 37	4 24	10 28	10 16	4 14
27 Fri.	0 56	1 2	3	6 54	5 8	10 53	11 14	7 7	4 56	10 52	11 14	7 21	4 41	10 53	11 15	7 38	4 25	10 53	11 15	4 56
28 Sat.	1 26	1 2	3	6 55	5 9	11 25	11 25	7 7	4 56	11 22	11 25	7 21	4 42	11 21	11 18	7 38	4 25	11 18	11 18	5 38
29 Sun.	1 55	1 2	4	6 55	5 9	11 57	0 5	7 7	4 57	11 54	0 8	7 21	4 43	11 49	0 11	7 38	4 26	11 45	0 14	6 20
30 Mon.	2 24	1 3	4	6 55	5 10	12 32	0 57	7 8	4 58	12 26	1 2	7 22	4 44	12 20	1 8	7 38	4 27	12 13	1 13	7 4
31 Tue.	2 53	1 3	4	6 56	5 10	1 10	1 51	7 8	4 58	1 2	1 58	7 22	4 44	12 54	2 5	7 38	4 28	12 44	2 14	7 50

# Longitude and Latitude of Foreign Cities and Time Corresponding to 12:00 Noon, E.S.T.

City	Long.	Lat.	Time	City	Long.	Lat.	Time
	° /	° /			° /	° /	
Aberdeen, Scotland.....	2 9 w	57 9 n	5:00 p.m.	Lima, Peru.....	77 2 w	12 0 s	12:00 noon
Adelaide, Australia.....	138 36 e	34 55 s	2:30 a.m.*	Lisbon, Portugal.....	9 9 w	38 44 n	5:00 p.m.
Algiers, Algeria.....	3 0 e	36 50 n	5:00 p.m.	Liverpool, England.....	3 0 w	53 25 n	5:00 p.m.
Amsterdam, Netherlands.....	4 53 e	52 22 n	5:00 p.m.	London, England.....	0 5 w	51 32 n	5:00 p.m.
Ankara, Turkey.....	32 55 e	39 55 n	7:00 p.m.	Lyon, France.....	4 50 e	45 45 n	5:00 p.m.
Asunción, Paraguay.....	57 40 w	25 15 s	1:00 p.m.	Madrid, Spain.....	3 42 w	40 26 n	5:00 p.m.
Athens, Greece.....	23 43 e	37 58 n	7:00 p.m.	Makassar, Celebes.....	119 30 e	5 9 s	1:00 a.m.*
Auckland, New Zealand.....	174 45 e	36 52 s	5:00 a.m.*	Manchester, England.....	2 15 w	53 30 n	5:00 p.m.
Bangkok, Thailand.....	100 30 e	13 45 n	0:00 a.m.*	Manila, Philippines.....	120 57 e	14 35 n	1:00 a.m.*
Barcelona, Spain.....	2 9 e	41 23 n	5:00 p.m.	Marseille, France.....	5 20 e	43 20 n	5:00 p.m.
Belém, Brazil.....	48 29 w	1 28 s	2:00 p.m.	Mazatlán, Mexico.....	106 25 w	23 12 n	11:00 a.m.
Belfast, Northern Ireland.....	5 56 w	54 37 n	5:00 p.m.	Mecca, Saudi Arabia.....	39 45 e	21 29 n	8:00 p.m.
Belgrade, Yugoslavia.....	20 32 e	44 52 n	6:00 p.m.	Melbourne, Australia.....	144 58 e	37 47 s	3:00 a.m.*
Berlin, Germany.....	13 25 e	52 30 n	6:00 p.m.	Mexico City, Mexico.....	99 7 w	19 26 n	11:00 a.m.
Birmingham, England.....	1 55 w	52 25 n	5:00 p.m.	Milan, Italy.....	9 10 e	45 27 n	6:00 p.m.
Bogotá, Colombia.....	74 15 w	4 32 n	12:00 noon	Montevideo, Uruguay.....	56 10 w	34 53 s	1:30 p.m.
Bombay, India.....	72 48 e	19 0 n	10:30 p.m.	Moscow, U.S.S.R.....	37 36 e	55 45 n	7:00 p.m.
Bordeaux, France.....	0 31 w	44 50 n	5:00 p.m.	Munich, Germany.....	11 35 e	48 8 n	6:00 p.m.
Bremen, Germany.....	8 49 e	53 5 n	6:00 p.m.	Nagasaki, Japan.....	129 57 e	32 48 n	2:00 a.m.*
Brisbane, Australia.....	153 8 w	27 29 s	3:00 a.m.*	Nagoya, Japan.....	136 56 e	35 7 n	2:00 a.m.*
Bristol, England.....	2 35 w	51 28 n	5:00 p.m.	Nairobi, Kenya.....	36 55 e	1 25 n	8:00 p.m.
Brussels, Belgium.....	4 22 e	50 52 n	5:00 p.m.	Nanking, China.....	118 53 e	32 3 n	1:00 a.m.*
Bucharest, Rumania.....	26 7 e	44 25 n	7:00 p.m.	Naples, Italy.....	14 15 e	40 50 n	6:00 p.m.
Budapest, Hungary.....	19 5 e	47 30 n	6:00 p.m.	Newcastle-on-Tyne, Eng... Odessa, U.S.S.R.....	1 37 w 30 48 e	54 58 n 46 27 n	5:00 p.m. 7:00 p.m.
Buenos Aires, Argentina.....	58 22 w	34 35 s	1:00 p.m.	Osaka, Japan.....	135 30 e	34 32 n	2:00 a.m.*
Cairo, Egypt.....	31 21 e	30 2 n	7:00 p.m.	Oslo, Norway.....	10 42 e	59 57 n	6:00 p.m.
Calcutta, India.....	88 24 e	22 34 n	10:30 p.m.	Panamá City, Panamá.....	79 32 w	8 58 n	12:00 noon
Canton, China.....	113 15 e	23 7 n	1:00 a.m.*	Paramaribo, Surinam.....	55 15 w	5 45 n	1:30 p.m.
Capetown, U. of S. Af.....	18 22 e	33 55 s	7:00 p.m.	Paris, France.....	2 20 e	48 48 n	5:00 p.m.
Caracas, Venezuela.....	67 20 w	10 28 n	12:30 p.m.	Peiping, China.....	116 25 e	39 55 s	1:00 a.m.*
Cayenne, French Guiana.....	52 18 w	4 49 n	1:30 p.m.	Perth, Australia.....	115 52 e	31 57 s	1:00 a.m.*
Chihuahua, Mexico.....	106 5 w	28 37 n	11:00 a.m.	Plymouth, England.....	4 5 w	50 25 n	5:00 p.m.
Chungking, China.....	106 34 e	29 46 n	0:00 a.m.*	Port Moresby, Papua Ter... Prague, Czechoslovakia.....	147 8 e 14 26 e	9 25 s 50 5 n	3:00 a.m.* 6:00 p.m.
Copenhagen, Denmark.....	12 34 e	55 40 n	6:00 p.m.	Rangoon, Burma.....	96 0 e	16 50 n	11:30 p.m.
Córdoba, Argentina.....	64 10 w	31 28 s	1:00 p.m.	Reykjavik, Iceland.....	21 58 w	64 4 n	4:00 p.m.
Dakar, French West Africa.....	17 28 w	14 40 n	4:00 p.m.	Rio de Janeiro, Brazil.....	43 12 w	22 57 s	2:00 p.m.
Darwin, Australia.....	130 51 e	12 28 s	2:30 a.m.*	Rome, Italy.....	12 27 e	41 54 n	6:00 p.m.
Dublin, Ireland.....	6 15 w	53 20 n	5:00 p.m.	San Juan, Puerto Rico.....	66 10 w	18 30 n	1:00 p.m.
Durban, U. of S. Af.....	30 53 e	29 53 s	7:00 p.m.	Santiago, Chile.....	70 45 w	33 28 s	1:00 p.m.
Edinburgh, Scotland.....	3 10 w	55 55 n	5:00 p.m.	São Paulo, Brazil.....	46 31 w	23 31 s	2:00 p.m.
Frankfurt, Germany.....	8 41 e	50 7 n	6:00 p.m.	São Salvador, Brazil.....	38 27 w	12 56 s	2:00 p.m.
Georgetown, British Guiana.....	58 15 w	6 45 n	1:30 p.m.	Shanghai, China.....	121 28 e	31 10 n	1:00 a.m.*
Glasgow, Scotland.....	4 15 w	55 50 n	5:00 p.m.	Singapore, British Malaya.....	103 55 e	1 14 n	0:30 a.m.*
Guatemala City, Guatemala.....	90 31 w	14 37 n	11:00 a.m.	Sofia, Bulgaria.....	23 20 e	42 40 n	7:00 p.m.
Guayaquil, Ecuador.....	79 56 w	2 10 s	12:00 noon	Stockholm, Sweden.....	18 3 e	59 17 n	6:00 p.m.
Hamburg, Germany.....	10 2 e	53 33 n	6:00 p.m.	Sydney, Australia.....	151 0 e	34 0 s	3:00 a.m.*
Hammerfest, Norway.....	23 38 e	70 38 n	6:00 p.m.	Tananarive, Madagascar.....	47 33 e	18 50 s	8:00 p.m.
Havana, Cuba.....	82 23 w	23 8 n	12:00 noon	Teheran, Iran.....	51 45 e	35 45 n	8:30 p.m.
Helsinki, Finland.....	25 0 e	60 10 n	7:00 p.m.	Tokyo, Japan.....	139 45 e	35 40 n	2:00 a.m.*
Hobart, Tasmania.....	147 19 e	42 52 s	3:00 a.m.*	Tripoli, Libya.....	13 12 e	32 57 n	6:00 p.m.
Iquique, Chile.....	70 7 w	20 10 s	1:00 p.m.	Venice, Italy.....	12 20 e	45 26 n	6:00 p.m.
Irkutsk, U.S.S.R.....	104 20 e	52 30 n	0:00 a.m.*	Veracruz, Mexico.....	96 10 w	19 10 n	11:00 a.m.
Jakarta, Java.....	106 48 e	6 16 s	1:00 a.m.*	Vienna, Austria.....	16 20 e	48 14 n	6:00 p.m.
Jibuti, French Somaliland.....	43 3 e	11 30 s	8:00 p.m.	Vladivostok, U.S.S.R.....	132 0 e	43 10 n	2:00 a.m.*
Johannesburg, U. of S. Af... Kingston, Jamaica.....	28 4 e 76 49 w	26 12 s 17 59 n	7:00 p.m. 12:00 noon	Warsaw, Poland.....	21 0 e	52 14 n	6:00 p.m.
La Paz, Bolivia.....	68 22 w	16 27 s	1:00 p.m.	Wellington, New Zealand... Zürich, Switzerland.....	174 47 e 8 31 e	41 17 s 47 21 n	5:00 a.m.* 6:00 p.m.
Leeds, England.....	1 30 w	53 45 n	5:00 p.m.				
Leningrad, U.S.S.R.....	30 18 e	59 56 n	7:00 p.m.				
Léopoldville, Belgian Congo.	15 17 e	4 18 s	6:00 p.m.				

\* On the following day.



# Longitude, Latitude, Time and Magnetic Declination of U. S. and Canadian Cities

The last column shows the magnetic declination or angle which the magnetic meridian makes with the true (geographic) meridian. The value being marked w or e, the north end of the compass needle points west or east respectively of true north by that number of degrees.

City	Long. w.	Lat. n.	Time*	Dec.	City	Long. w.	Lat. n.	Time*	Dec.
	° /	° /		°		° /	° /		°
Albany, N. Y.	73 45	42 40	12:00 noon	13 w	Milwaukee, Wis.	87 55	43 2	11:00 a.m.	2 e
Amarillo, Tex.	101 50	35 11	11:00 a.m.	12 e	Minneapolis, Minn.	93 14	44 59	11:00 a.m.	7 e
Atlanta, Ga.	84 23	33 45	12:00 noon	2 e	Mobile, Ala.	88 3	30 42	11:00 a.m.	5 e
Atlantic City, N. J.	74 25	39 22	12:00 noon	10 w	Montgomery, Ala.	86 18	32 21	11:00 a.m.	3 e
Austin, Nev.	117 4	39 29	9:00 a.m.	18 e	Montpelier, Vt.	72 32	44 15	12:00 noon	16 w
Baker, Oreg.	117 50	44 47	9:00 a.m.	21 e	Montreal, Que.	73 35	45 30	12:00 noon	16 w
Baltimore, Md.	76 38	39 18	12:00 noon	8 w	Moose Jaw, Sask.	105 31	50 37	10:00 a.m.	18 e
Bangor, Maine.	68 47	44 48	12:00 noon	19 w	Nashville, Tenn.	86 47	36 10	11:00 a.m.	3 e
Birmingham, Ala.	86 50	33 30	11:00 a.m.	3 e	Needles, Calif.	114 36	34 50	9:00 a.m.	15 e
Bismarck, N. Dak.	100 47	46 48	11:00 a.m.	14 e	Nelson, B. C.	117 17	49 30	9:00 a.m.	23 e
Boise, Idaho.	116 13	43 36	10:00 a.m.	19 e	New Haven, Conn.	72 55	41 19	12:00 noon	12 w
Boston, Mass.	71 5	42 21	12:00 noon	15 w	New Orleans, La.	90 4	29 57	11:00 a.m.	6 e
Buffalo, N. Y.	78 50	42 55	12:00 noon	7 w	New York, N. Y.	73 58	40 47	12:00 noon	12 w
Calgary, Alta.	114 1	51 1	10:00 a.m.	23 e	Nogales, Ariz.	110 56	31 21	10:00 a.m.	14 e
Carlsbad, N. Mex.	104 15	32 26	10:00 a.m.	13 e	Nome, Alaska.	165 30	64 25	6:00 a.m.	19 e
Charleston, S. C.	79 56	32 47	12:00 noon	2 w	North Platte, Nebr.	100 46	41 8	11:00 a.m.	12 e
Charleston, W. Va.	81 38	38 21	12:00 noon	2 w	Oklahoma City, Okla.	97 28	35 26	11:00 a.m.	10 e
Charlotte, N. C.	80 50	35 14	12:00 noon	2 w	Ottawa, Ont.	75 43	45 24	12:00 noon	14 w
Cheyenne, Wyo.	104 52	41 9	10:00 a.m.	15 e	Philadelphia, Pa.	75 10	39 57	12:00 noon	10 w
Chicago, Ill.	87 37	41 50	11:00 a.m.	2 e	Phoenix, Ariz.	112 4	33 29	10:00 a.m.	15 e
Cincinnati, Ohio.	84 30	39 8	12:00 noon	1 e	Pierre, S. Dak.	100 21	44 22	11:00 a.m.	12 e
Cleveland, Ohio.	81 37	41 28	12:00 noon	5 w	Pittsburgh, Pa.	79 57	40 27	12:00 noon	5 w
Columbia, S. C.	81 2	34 0	12:00 noon	1 w	Port Arthur, Ont.	89 17	48 30	12:00 noon	1 e
Columbus, Ohio.	83 1	40 0	12:00 noon	2 w	Portland, Maine.	70 15	43 40	12:00 noon	17 w
Dallas, Tex.	96 46	32 46	11:00 a.m.	9 e	Portland, Oreg.	122 41	45 31	9:00 a.m.	23 e
Denver, Colo.	105 0	39 45	10:00 a.m.	14 e	Providence, R. I.	71 24	41 50	12:00 noon	15 w
Des Moines, Iowa.	93 37	41 35	11:00 a.m.	7 e	Quebec, Que.	71 11	46 49	12:00 noon	20 w
Detroit, Mich.	83 3	42 20	12:00 noon	3 w	Raleigh, N. C.	78 39	35 46	12:00 noon	4 w
Dubuque, Iowa.	90 40	42 31	11:00 a.m.	5 e	Reno, Nev.	119 49	39 30	9:00 a.m.	18 e
Duluth, Minn.	92 5	46 49	11:00 a.m.	7 e	Richfield, Utah.	112 5	38 46	10:00 a.m.	17 e
Eastport, Maine.	67 0	44 54	12:00 noon	21 w	Richmond, Va.	77 29	37 33	12:00 noon	6 w
El Centro, Calif.	115 33	32 38	9:00 a.m.	15 e	Roanoke, Va.	79 57	37 17	12:00 noon	3 w
El Paso, Tex.	106 29	31 46	11:00 a.m.	13 e	Sacramento, Calif.	121 30	38 35	9:00 a.m.	17 e
Eugene, Oreg.	123 5	44 3	9:00 a.m.	22 e	St. John, N. B.	66 10	45 18	1:00 p.m.	22 w
Fargo, N. Dak.	96 48	46 52	11:00 a.m.	10 e	St. Louis, Mo.	90 12	38 35	11:00 a.m.	5 e
Flagstaff, Ariz.	111 41	35 13	10:00 a.m.	15 e	Salmon, Idaho.	113 54	45 11	10:00 a.m.	20 e
Fresno, Calif.	119 48	36 44	9:00 a.m.	17 e	Salt Lake City, Utah.	111 54	40 46	10:00 a.m.	17 e
Garden City, Kans.	100 53	37 58	10:00 a.m.	13 e	San Antonio, Tex.	98 33	29 23	11:00 a.m.	10 e
Grand Junction, Colo.	108 33	39 5	10:00 a.m.	15 e	San Diego, Calif.	117 10	32 42	9:00 a.m.	15 e
Grand Rapids, Mich.	85 40	42 58	11:00 a.m.	1 e	San Francisco, Calif.	122 26	37 47	9:00 a.m.	18 e
Havre, Mont.	109 43	48 33	10:00 a.m.	20 e	Santa Fe, N. Mex.	105 57	35 41	10:00 a.m.	13 e
Helena, Mont.	112 2	46 35	10:00 a.m.	19 e	Sault Ste. Marie, Mich.	84 21	46 30	11:00 a.m.	4 w
Honolulu, Hawaii	157 50	21 18	7:00 a.m.	—	Savannah, Ga.	81 5	32 5	12:00 noon	0
Hoquiam, Wash.	123 54	46 59	9:00 a.m.	23 e	Scranton, Pa.	75 39	41 24	12:00 noon	10 w
Hot Springs, Ark.	93 3	34 31	11:00 a.m.	8 e	Seattle, Wash.	122 20	47 37	9:00 a.m.	23 e
Idaho Falls, Idaho.	112 1	43 30	10:00 a.m.	18 e	Shreveport, La.	93 42	32 28	11:00 a.m.	8 e
Indianapolis, Ind.	86 10	39 46	11:00 a.m.	1 e	Silver City, N. Mex.	108 18	32 46	10:00 a.m.	14 e
Jackson, Miss.	90 12	32 20	11:00 a.m.	7 e	Sioux Falls, S. Dak.	96 44	43 33	11:00 a.m.	11 e
Jacksonville, Fla.	81 40	30 22	12:00 noon	1 e	Sitka, Alaska.	135 15	57 10	9:00 a.m.	30 e
Kansas City, Mo.	94 35	39 6	11:00 a.m.	9 e	Spokane, Wash.	117 26	47 40	9:00 a.m.	23 e
Key West, Fla.	81 48	24 33	12:00 noon	3 e	Springfield, Ill.	89 38	39 48	11:00 a.m.	4 e
Kingston, Ont.	76 30	44 15	12:00 noon	12 w	Springfield, Mass.	72 34	42 6	12:00 noon	14 w
Klamath Falls, Oreg.	121 44	42 10	9:00 a.m.	19 e	Springfield, Mo.	93 17	37 13	11:00 a.m.	7 e
Knoxville, Tenn.	83 56	35 57	11:00 a.m.	0	Syracuse, N. Y.	76 8	43 2	12:00 noon	11 w
Lander, Wyo.	108 40	42 50	10:00 a.m.	17 e	Tampa, Fla.	82 27	27 57	12:00 noon	2 e
Las Vegas, Nev.	115 12	36 10	9:00 a.m.	16 e	Toronto, Ont.	79 24	43 40	12:00 noon	8 w
Lewiston, Idaho.	117 2	46 24	9:00 a.m.	21 e	Trinidad, Colo.	104 30	37 10	10:00 a.m.	14 e
Lincoln, Nebr.	96 40	40 50	11:00 a.m.	10 e	Victoria, B. C.	123 21	48 25	9:00 a.m.	24 e
London, Ont.	81 34	43 2	12:00 noon	5 w	Watertown, N. Y.	75 55	43 58	12:00 noon	13 w
Los Angeles, Calif.	118 15	34 3	9:00 a.m.	15 e	Wichita, Kans.	97 17	37 43	11:00 a.m.	10 e
Louisville, Ky.	85 46	38 15	11:00 a.m.	1 e	Wilmington, N. C.	77 57	34 14	12:00 noon	3 w
Manchester, N. H.	71 30	43 0	12:00 noon	16 w	Winnipeg, Man.	97 7	49 54	11:00 a.m.	11 e
Memphis, Tenn.	90 3	35 9	11:00 a.m.	6 e	Yakima, Wash.	120 33	46 34	9:00 a.m.	22 e
Miami, Fla.	80 12	25 46	12:00 noon	1 e					

\* Corresponding to 12:00 noon, E.S.T.

1956 JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	—	—	—	1	2	3	4	—	—	—	1	2	3	4	1	2	3	4	5	6	7
8	9	10	11	12	13	14	5	6	7	8	9	10	11	4	5	6	7	8	9	10	8	9	10	11	12	13	14
15	16	17	18	19	20	21	12	13	14	15	16	17	18	11	12	13	14	15	16	17	15	16	17	18	19	20	21
22	23	24	25	26	27	28	19	20	21	22	23	24	25	18	19	20	21	22	23	24	22	23	24	25	26	27	28
29	30	31	—	—	—	—	26	27	28	29	—	—	—	25	26	27	28	29	30	31	29	30	—	—	—	—	—
MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
—	—	—	1	2	3	4	—	—	—	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25
27	28	29	30	31	—	—	24	25	26	27	28	29	30	29	30	31	—	—	—	—	26	27	28	29	30	31	—
SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22
23/30	24	25	26	27	28	29	28	29	30	31	—	—	—	25	26	27	28	29	30	—	23/30	24/31	25	26	27	28	29

1957 JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
—	—	—	1	2	3	4	—	—	—	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	7	8	9	10	11	12	3	4	5	6	7	8	9	3	4	5	6	7	8	9	7	8	9	10	11	12	13
13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16	14	15	16	17	18	19	20
20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23	21	22	23	24	25	26	27
27	28	29	30	31	—	—	24	25	26	27	28	—	—	24/31	25	26	27	28	29	30	28	29	30	—	—	—	—
MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
26	27	28	29	30	31	—	23/30	24	25	26	27	28	29	28	29	30	31	—	—	—	25	26	27	28	29	30	31
SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9	1	2	3	4	5	6	7
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16	8	9	10	11	12	13	14
15	16	17	18	19	20	21	20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
22	23	24	25	26	27	28	27	28	29	30	31	—	—	24													

1958 JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8	6	7	8	9	10	11	12
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15	13	14	15	16	17	18	19
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22	20	21	22	23	24	25	26
26	27	28	29	30	31	—	23	24	25	26	27	28	—	23/30	24/31	25	26	27	28	29	27	28	29	30	—	—	—
MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	5	6	7	8	9	10	1	2	3	4	5	6	7	6	7	8	9	10	11	12	3	4	5	6	7	8	9
11	12	13	14	15	16	17	8	9	10	11	12	13	14	13	14	15	16	17	18	19	10	11	12	13	14	15	16
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23
25	26	27	28	29	30	31	29	30	—	—	—	—	—	27	28	29	30	31	—	—	24/31	25	26	27	28	29	30
SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9	1	2	3	4	5	6	7
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16	8	9	10	11	12	13	14
15	16	17	18	19	20	21	20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
22	23	24	25	26	27	28	27	28	29	30	31	—	—	24													

## Perpetual Calendar 1800-2000 A.D.

Day of the month	Jan. Oct.	Apr. Jul. Jan.	Sept. Dec.	Jun.	Feb. Mar. Nov.	Aug. Feb.	May	
1 8 15 22 29.....	A	B	C	D	E	F	G	Mon.
2 9 16 23 30.....	G	A	B	C	D	E	F	Tue.
3 10 17 24 31.....	F	G	A	B	C	D	E	Wed.
4 11 18 25.....	E	F	G	A	B	C	D	Thur.
5 12 19 26.....	D	E	F	G	A	B	C	Fri.
6 13 20 27.....	C	D	E	F	G	A	B	Sat.
7 14 21 28.....	B	C	D	E	F	G	A	Sun.
	.....	.....	1800	1801	1802	1803	.....	
	1804	1805	1806	1807	.....	1808	1809	
	1810	1811	.....	1812	1813	1814	1815	
	.....	1816	1817	1818	1819	.....	1820	
EXAMPLES	1821	1822	1823	.....	1824	1825	1826	
	1827	.....	1828	1829	1830	1831	.....	
(1) Given Nov. 20, 1891, to find the day of the week. Under Nov., opposite 20, is G. In the 1891 column, opposite G is Fri., <i>ans.</i>	1832	1833	1834	1835	.....	1836	1837	
	1838	1839	.....	1840	1841	1842	1843	
	.....	1844	1845	1846	1847	.....	1848	
	1849	1850	1851	.....	1852	1853	1854	
(2) Given Fri., Oct. —, 1868, to find the possible days of the month. In the 1868 column, opposite Fri. is G. Under Oct., G gives 2, 9, 16, 23, 30, <i>ans.</i> , the Fridays of Oct., 1868.	1855	.....	1856	1857	1858	1859	.....	
	1860	1861	1862	1863	.....	1864	1865	
	1866	1867	.....	1868	1869	1870	1871	
	.....	1872	1873	1874	1875	.....	1876	
	1877	1878	1879	.....	1880	1881	1882	
(3) Given Mon., — 5, 1811, to find the possible months. In the 1811 column, opposite Mon. is B. Opposite 5, B gives Aug., the only common-year month available, <i>ans.</i>	1883	.....	1884	1885	1886	1887	.....	
	1888	1889	1890	1891	.....	1892	1893	
	1894	1895	.....	1896	1897	1898	1899	
	1900	1901	1902	1903	.....	1904	1905	
	1906	1907	.....	1908	1909	1910	1911	
(4) Given Sat., Feb. 29, —, to find the possible years. Under Feb., leap-year, opposite 29, is F. Opposite Sat. F gives leap-years 1812, 1840, 1868, 1896, etc., <i>ans.</i>	.....	1912	1913	1914	1915	.....	1916	
	1917	1918	1919	.....	1920	1921	1922	
	1923	.....	1924	1925	1926	1927	.....	
	1928	1929	1930	1931	.....	1932	1933	
	1934	1935	.....	1936	1937	1938	1939	
NOTE: In leap-years (those shown in italics), use the Jan. and Feb. in italics, but do not use these for common years. The years 1800 and 1900 were not leap-years; 2000 will be a leap-year.	.....	1940	1941	1942	1943	.....	1944	
	1945	1946	1947	.....	1948	1949	1950	
	1951	.....	1952	1953	1954	1955	.....	
	1956	1957	1958	1959	.....	1960	1961	
	1962	1963	.....	1964	1965	1966	1967	
	.....	1968	1969	1970	1971	.....	1972	
	1973	1974	1975	.....	1976	1977	1978	
	1979	.....	1980	1981	1982	1983	.....	
	1984	1985	1986	1987	.....	1988	1989	
	1990	1991	.....	1992	1993	1994	1995	
	.....	1996	1997	1998	1999	.....	2000	

## Morning and Evening Stars and Planets in 1957

## MERCURY

Evening star, Jan. 1 to Jan 10  
 Morning star, Jan. 10 to Mar. 20  
 Evening star, Mar. 20 to May 5  
 Morning star, May 5 to July 4  
 Evening star, July 4 to Sept. 9  
 Morning star, Sept. 9 to Oct. 23  
 Evening star, Oct. 23 to Dec. 25  
 Morning star, Dec. 25 to Dec. 31

## VENUS

Morning star, Jan. 1 to Apr. 14  
 Evening star, Apr. 14 to Dec. 31

## MARS

Evening star, Jan. 1 to Sept. 21  
 Morning star, Sept. 21 to Dec. 31



## JUPITER

Morning star, Jan. 1 to Mar. 17

Evening star, Mar. 17 to Oct. 5

Morning star, Oct. 5 to Dec. 31

## SATURN

Morning star, Jan. 1 to June 1

Evening star, June 1 to Dec. 8

Morning star, Dec. 8 to Dec. 31

*Mercury* may be seen over the western horizon after sunset for a week or more around eastern elongation from the sun, and before sunrise over the eastern horizon similarly around western elongations. Eastern elongations occur Apr. 15 (*Mercury* in Aries, considerably west of Aldebaran), Aug. 13 (in western Virgo), and Dec. 7 (in Sagittarius). Western elongations occur Feb. 2 (in Sagittarius), June 1 (in Aries, west of Aldebaran), and Sept. 25 (in Leo, east and south of Regulus).

*Venus* is in Ophiuchus in early January, visible before sunrise. Beginning near the end of April it is seen over the western horizon after sunset, and in July, for example, it is in Cancer and Leo. Eastern elongation occurs Nov. 18, in Sagittarius, near the dipper. Greatest brilliancy is on Dec. 23, in Capricornus, the stellar magnitude being  $-4.4$ , which is the maximum.

*Mars* during the first 3 months goes from southern Pisces to Taurus (north of

Aldebaran). By June 1 it is in Gemini, by July 1 in Cancer, and by Aug. 1 in Leo, northwest of Regulus. By mid-November it is in eastern Virgo, rising before the sun, and by Dec. 1 it is in Libra.

*Jupiter* as morning star is in western Virgo, as evening star in Virgo; and in November it is also in Virgo, north of Spica. On Aug. 22, *Venus* passes close to and just south of *Jupiter* in conjunction.

*Saturn* is in Ophiuchus during the year, north and northeast of Antares. The moon, each month in 1957, passes very close to *Saturn* in apparent position, and on Aug. 31 passes over it in occultation as seen from California stations. On Oct. 20, *Venus* is in conjunction with *Saturn*, *Venus* being  $4^\circ$  south of *Saturn*.

*Uranus* is in Cancer all the year, not far from the Beehive star cluster, and may be observed with a field-glass except during July and August. On June 29, *Mars* is in conjunction with *Uranus*, *Mars* being just north of *Uranus*. *Neptune*—a telescopic object—is in eastern Virgo during the year, east of Spica. The closest apparent approach to Spica is in mid-July, when *Neptune* is about  $8^\circ$  east of the star. On Sept. 15 *Venus* passes  $2\frac{1}{2}^\circ$  south of *Neptune* in conjunction. *Pluto*, seen only in a large telescope, is in Leo, near the eastern part of the sickle.

## Phases of the Moon for 1957

	E. S. T.			C. S. T.			M. S. T.			P. S. T.		
	d	h	m	d	h	m	d	h	m	d	h	m
First Quarter JANUARY.....	9	2	6 am	9	1	6 am	9	0	6 am	8	11	6 pm
Full Moon.....	16	1	21 am	16	0	21 am	15	11	21 pm	15	10	21 pm
Last Quarter.....	22	4	48 pm	22	3	48 pm	22	2	48 pm	22	1	48 pm
New Moon.....	30	4	24 pm	30	3	24 pm	30	2	24 pm	30	1	24 pm
First Quarter FEBRUARY.....	7	6	23 pm	7	5	23 pm	7	4	23 pm	7	3	23 pm
Full Moon.....	14	11	38 am	14	10	38 am	14	9	38 am	14	8	38 am
Last Quarter.....	21	7	18 am	21	6	18 am	21	5	18 am	21	4	18 am
New Moon MARCH.....	1	11	12 am	1	10	12 am	1	9	12 am	1	8	12 am
First Quarter.....	9	6	50 am	9	5	50 am	9	4	50 am	9	3	50 am
Full Moon.....	15	9	22 pm	15	8	22 pm	15	7	22 pm	15	6	22 pm
Last Quarter.....	23	0	4 am	22	11	4 pm	22	10	4 pm	22	9	4 pm
New Moon.....	31	4	19 am	31	3	19 am	31	2	19 am	31	1	19 am
First Quarter APRIL.....	7	3	32 pm	7	2	32 pm	7	1	32 pm	7	12	32 pm
Full Moon.....	14	7	9 am	14	6	9 am	14	5	9 am	14	4	9 am
Last Quarter.....	21	6	0 pm	21	5	0 pm	21	4	0 pm	21	3	0 pm
New Moon.....	29	6	54 pm	29	5	54 pm	29	4	54 pm	29	3	54 pm
First Quarter MAY.....	6	9	29 pm	6	8	29 pm	6	7	29 pm	6	6	29 pm
Full Moon.....	13	5	34 pm	13	4	34 pm	13	3	34 pm	13	2	34 pm
Last Quarter.....	21	12	3 pm	21	11	3 am	21	10	3 am	21	9	3 am
New Moon.....	29	6	39 am	29	5	39 am	29	4	39 am	29	3	39 am
First Quarter JUNE.....	5	2	10 am	5	1	10 am	5	0	10 am	4	11	10 pm
Full Moon.....	12	5	2 am	12	4	2 am	12	3	2 am	12	2	2 am
Last Quarter.....	20	5	22 am	20	4	22 am	20	3	22 am	20	2	22 am
New Moon.....	27	3	53 pm	27	2	53 pm	27	1	53 pm	27	12	53 pm

## Phases of the Moon for 1957 (Contd.)

First Quarter JULY.....	4 7 9 am	4 6 9 am	4 5 9 am	4 4 9 am
Full Moon.....	11 5 50 pm	11 4 50 pm	11 3 50 pm	11 2 50 pm
Last Quarter.....	19 9 17 pm	19 8 17 pm	19 7 17 pm	19 6 17 pm
New Moon.....	26 11 28 pm	26 10 28 pm	26 9 28 pm	26 8 28 pm
First Quarter AUGUST.....	2 1 55 pm	2 12 55 pm	2 11 55 am	2 10 55 am
Full Moon.....	10 8 8 am	10 7 8 am	10 6 8 am	10 5 8 am
Last Quarter.....	18 11 16 am	18 10 16 am	18 9 16 am	18 8 16 am
New Moon.....	25 6 32 am	25 5 32 am	25 4 32 am	25 3 32 am
First Quarter.....	31 11 34 pm	31 10 34 pm	31 9 34 pm	31 8 34 pm
Full Moon SEPTEMBER.....	8 11 55 pm	8 10 55 pm	8 9 55 pm	8 8 55 pm
Last Quarter.....	16 11 2 pm	16 10 2 pm	16 9 2 pm	16 8 2 pm
New Moon.....	23 2 18 pm	23 1 18 pm	23 12 18 pm	23 11 18 am
First Quarter.....	30 12 49 pm	30 11 49 am	30 10 49 am	30 9 49 am
Full Moon OCTOBER.....	8 4 42 pm	8 3 42 pm	8 2 42 pm	8 1 42 pm
Last Quarter.....	16 8 44 am	16 7 44 am	16 6 44 am	16 5 44 am
New Moon.....	22 11 43 pm	22 10 43 pm	22 9 43 pm	22 8 43 pm
First Quarter.....	30 5 48 am	30 4 48 am	30 3 48 am	30 2 48 am
Full Moon NOVEMBER.....	7 9 32 am	7 8 32 am	7 7 32 am	7 6 32 am
Last Quarter.....	14 4 59 pm	14 3 59 pm	14 2 59 pm	14 1 59 pm
New Moon.....	21 11 19 am	21 10 19 am	21 9 19 am	21 8 19 am
First Quarter.....	29 1 57 am	29 0 57 am	28 11 57 pm	28 10 57 pm
Full Moon DECEMBER.....	7 1 16 am	7 0 16 am	6 11 16 pm	6 10 16 pm
Last Quarter.....	14 0 45 am	13 11 45 pm	13 10 45 pm	13 9 45 pm
New Moon.....	21 1 12 am	21 0 12 am	20 11 12 pm	20 10 12 pm
First Quarter.....	28 11 52 pm	28 10 52 pm	28 9 52 pm	28 8 52 pm

## The Sun

There are countless millions of far distant, superheated, self-luminous gaseous bodies called stars and each one is in itself a sun. Our Sun—the star around which our whole solar system revolves—is at a mean distance of 93,003,000 miles from the Earth, has a diameter of 865,390 miles, a surface temperature of about 11,000° F. and an interior temperature estimated at millions of degrees. It has a surface area approximately 12,000 times that of the Earth and in volume or bulk it is about 1,306,000 times the size of the Earth. It is a star of average size and temperature.

The Sun rotates on its axis and, by observation of Sun-spots (great whirling storms in the Sun's atmosphere) and Faculae (bright streaks or areas on the Sun's surface), astronomers have discovered that the rotational speed varies from approximately 24 $\frac{3}{4}$  days at its equator to approximately 34 days near its poles. The Sun is just one star of the great Milky Way Galaxy that is rotating on its galactic axis at a rate that gives the Sun a galactic traveling speed of 175 miles per second. Furthermore, the Sun is moving toward a point known as "the apex of the Sun's way" in the constellation Hercules at a speed of about 12 miles per second.

What we see when we look at the Sun is the glowing surface called the Photosphere. Extending above this surface is the

Sun's atmosphere consisting of two layers, one extending outward for a few hundred miles from the Sun's surface and called the Reversing Layer for spectroscopic reasons, the other an outer layer extending several thousand miles and called the Chromosphere because of its reddish color due mostly to superheated hydrogen, helium and calcium. Solar "prominences" occasionally burst out from this layer and extend hundreds of thousands of miles above the Sun's surface. Beyond these layers of solar atmosphere and extending to great height is the outermost observable solar feature, the magnificent Corona of exceedingly slight density that provides an awesome spectacle for observers during total eclipses of the Sun.

## Comets

In ancient times comets were supposed to be omens of sudden death, war, revolution or other dire events in human affairs and practically nothing was known of their true nature. They still offer puzzling problems to modern astronomers and, with about 1000 listed, new ones are being discovered and charted each year. In general, comets consist of a nucleus (sometimes lacking) surrounded by a head or "coma" (from the Greek word for hair because of its hazy appearance) from which extends the great tail that makes the passage of a comet through our skies such a striking

## The Brightest Stars

Star	Constellation	Position, 1950		Mag.	Dist.	On meridian 9 p.m.		
		R.A.	Dec.					
		h	m	°	'			
Sirius.....	Canis Major.....	6	42.9	-16	39	-1.6	8	Feb. 16
Canopus.....	Carina.....	6	22.8	-52	40	-0.9	650	Feb. 11
Alpha Centauri.....	Centaurus.....	14	36.2	-60	38	+0.1	4	June 16
Vega.....	Lyra.....	18	35.2	+38	44	0.1	23	Aug. 15
Capella.....	Auriga.....	5	13.0	+45	57	0.2	42	Jan. 24
Arcturus.....	Boötes.....	14	13.4	+19	27	0.2	32	June 10
Rigel.....	Orion.....	5	12.1	-8	15	0.3	545	Jan. 24
Procyon.....	Canis Minor.....	7	36.7	+5	21	0.5	10	Mar. 2
Achernar.....	Eridanus.....	1	35.9	-57	29	0.6	70	Nov. 30
Beta Centauri.....	Centaurus.....	14	0.3	-60	8	0.9	130	June 7
Altair.....	Aquila.....	19	48.3	+8	44	0.9	18	Sept. 3
Betelgeuse.....	Orion.....	5	52.5	+7	24	0.9	300	Feb. 3
Aldebaran.....	Taurus.....	4	33.0	+16	25	1.1	54	Jan. 14
Spica.....	Virgo.....	13	22.6	-10	54	1.2	190	May 28
Pollux.....	Gemini.....	7	42.3	+28	9	1.2	31	Mar. 3
Antares.....	Scorpius.....	16	26.3	-26	19	1.2	170	July 14
Fomalhaut.....	Piscis Austrinus.....	22	54.9	-29	53	1.3	27	Oct. 20
Deneb.....	Cygnus.....	20	39.7	+45	6	1.3	465	Sept. 16
Regulus.....	Leo.....	10	5.7	+12	13	1.3	70	Apr. 9
Beta Crucis.....	Crux.....	12	44.8	-59	25	1.5	465	May 18
Eta Carinae.....	Carina.....	10	43.1	-59	25	1-7	...	Apr. 17
Alpha-one Crucis.....	Crux.....	12	23.8	-62	49	1.6	150	May 13
Castor.....	Gemini.....	7	31.4	+32	0	1.6	44	Feb. 28
Gamma Crucis.....	Crux.....	12	28.4	-56	50	1.6	...	May 15
Epsilon Canis Majoris.....	Canis Major.....	6	56.7	-28	54	1.6	325	Feb. 19
Epsilon Ursae Majoris.....	Ursa Major.....	12	51.8	+56	14	1.7	50	May 20
Bellatrix.....	Orion.....	5	22.4	+6	18	1.7	215	Jan. 27
Lambda Scorpii.....	Scorpius.....	17	30.2	-37	4	1.7	205	July 30
Epsilon Carinae.....	Carina.....	8	21.5	-59	21	1.7	325	Mar. 13
Mira.....	Cetus.....	2	16.8	-3	12	2-9	250	Dec. 11
Epsilon Orionis.....	Orion.....	5	33.7	-1	14	1.7	405	Jan. 29
Beta Tauri.....	Taurus.....	5	23.1	+28	34	1.8	115	Jan. 27
Beta Carinae.....	Carina.....	9	12.7	-69	31	1.8	...	Mar. 26
Alpha Trianguli Australis.....	Triangulum Australe.....	16	43.4	-68	56	1.9	130	July 18
Alpha Persei.....	Perseus.....	3	20.7	+49	41	1.9	190	Dec. 27
Eta Ursae Majoris.....	Ursa Major.....	13	45.6	+49	34	1.9	220	June 3
Gamma Geminorum.....	Gemini.....	6	34.8	+16	27	1.9	65	Feb. 14
Epsilon Sagittarii.....	Sagittarius.....	18	20.9	-34	25	1.9	165	Aug. 12
Alpha Ursae Majoris.....	Ursa Major.....	11	0.7	+62	1	1.9	90	Apr. 22
Delta Canis Majoris.....	Canis Major.....	7	6.4	-26	19	2.0	410	Feb. 22

spectacle. Comets come in varying sizes but the average diameter of the heads of a large number of observed comets is about 80,000 miles and the tail length may stretch out to more than 100,000,000 miles. The density of comets is so low, however, that we can see the stars through them and there is more actual material in one cubic inch of ordinary air than in 2000 cubic miles of the tail of a comet.

The luminous tails of comets were believed, for many centuries, to be merely clouds high in our atmosphere. Tycho Brahe, eccentric Danish astronomer, proved that the comet he observed in 1577 was a celestial object far beyond the limit of the Earth's atmosphere. But the great forward step in the study of comets came when Edmund Halley, who became England's Astronomer Royal, carefully observed a comet in 1682, checked with previous observations, calculated its orbit and pre-

dicted its return to our skies in 1758 or 1759. Halley died in 1742 but the comet, now named after him, reappeared on schedule and a search through ancient records indicated that it had been observed in repeated appearances as far back as 240 B.C. Its last appearance was marked by its perihelion passage in 1910 and its next visit to our skies will occur in 1986. Halley's fulfilled prediction was the first definite proof that comets have regular orbits and time schedules or are, as the astronomers say, "periodic". The known "periods" (time intervals between appearances) of comets vary from the 3.3 years of Encke's Comet to thousands of years for wider travelers. No known great comets are scheduled for appearance in our sky this year.

A curious thing about comets is that their tails always trail from the head in a direction away from the Sun, so that when a comet is moving away from the Sun, the



## 20 Famous Comets

Year and no.	Name of comet	Period, years
1744	De Chéseaux's Comet.....	.....
1806	Biela's Comet.....	6.7
1811 I	Great Comet of 1811.....	3000
1812	Di Vico's Comet.....	70.7
1815	Olbers' Comet.....	74.0
1819 I	Encke's Comet.....	3.3
1819	Pons-Winnecke Comet.....	6.0
1835 III	Halley's Comet.....	76.3
1843 I	Great Comet of 1843.....	512.4
1844 II	Great Comet of 1844.....	102,050
1858 VI	Donati's Comet.....	2,040 (†)
1864 II	Great Comet of 1864.....	2,800,000
1871 III	Tuttle's Comet.....	13.8
1874 III	Coggia's Comet.....	6,000 (†)
1879	Brorsen's Comet.....	5.6
1881 II	Tebbutt's Comet.....	.....
1889 VI	Swift's 2nd Comet.....	7.0
1892 III	Holmes' Comet.....	6.9
1923	d'Arrest's Comet.....	6.6
1925 II	Comet Schwassmann-Wachmann..	16.2

tail stretches out in front of the head. A comet's tail is so tenuous as to be almost a vacuum. The Earth passed through the tail of Halley's Comet in May, 1910, and on that occasion astronomers heard nothing, felt nothing and saw nothing to indicate that such passage had any observable effect on the Earth.

### The Polar Auroras

It has been definitely established that Sun-spots are the direct cause of the greatest electrical show on Earth, a double feature, the Aurora Borealis (Northern Lights) and the Aurora Australis (Southern Lights). Sun-spots are magnetic storms of vast dimensions on the surface of the Sun and they shoot out electrified particles into space. Those that come toward the Earth are drawn toward the Earth's magnetic poles and consequently these magnetic poles are the radiating centers of those spectacular electromagnetic displays in the sky that we commonly call the "Northern Lights" or the "Southern Lights", depending upon whether we see them in the northern or southern hemisphere. The electrical particles from the Sun-spots strike the upper regions of our atmosphere where the component gases (nitrogen, oxygen and extremely minor amounts of argon, helium, neon, hydrogen and carbon dioxide) are very much rarefied and cause them to vibrate and glow in colors characteristic of the various elements, just as a neon sign glows when an electric charge is passed through it. The Sun-spots that cause auroral displays also cause the magnetic storms that interfere with radio reception, telephone, telegraph and cable traffic and other electromagnetic devices such as compasses and various aviation accessories.

There is an almost infinite variety to the auroral display. The lights may sweep across the sky in waves, in streamers or in folds like draped curtains. Or it may be a stationary glow. Sometimes there is little or no color in these waves, sheets or streamers of light. At other times the lights may be rich in red or green or pasty shades. Rose color and lavender and violet and purple are common. Blue is rare but has been seen. The "Northern Lights" have been seen as far south as New Orleans and the Florida peninsula and the "Southern Lights" have been seen as far north as New Zealand and Australia, but the maximum occurrence of these auroral displays is along the borders of the Arctic and Antarctic regions. Since these are atmospheric displays, our atmosphere must extend to the extreme height at which auroral lights are observed. Prof. Carl Störmer of the University of Oslo found this to be about 600 miles. He further found that no auroral lights came closer to the Earth's surface than 50 or 60 miles.

### The Change of Seasons

It is enough to state that the earth is nearer to the sun in January than it is in July to convince those who live in the northern hemisphere that there must be some other explanation than that for the seasonal changes on our globe. The reason for the change in seasons is that the axis of rotation of the earth is inclined to the perpendicular of the plane of its orbit about the sun at an angle of approximately  $23\frac{1}{2}^{\circ}$ , so there is a proportional shifting of the angle of the sun's rays falling on different portions of the earth's surface at different times of the year.

On or about June 21, the north end of the earth's axis is inclined to its limit toward the sun. In the northern hemisphere this is our summer solstice. We then have our longest daylight period and a maximum of heat and light from the sun, whose perpendicular rays are falling on the Tropic of Cancer,  $23\frac{1}{2}^{\circ}$  north of the equator. Six months later, on or about Dec. 22, the earth has reached a position in its orbit that finds the north end of its axis inclined at its maximum away from the sun. This is our winter solstice. We then have our shortest daylight period and a minimum of heat and light from the sun, which is over the Tropic of Capricorn,  $23\frac{1}{2}^{\circ}$  south of the equator. Conditions are reversed in the southern hemisphere for obvious reasons. Their winter is our summer; their summer is our winter. Twice a year, at the equinoxes in March and September, the sun is on the equator, the day is of equal length all over the world and each hemisphere receives the same amount of light and heat from the rays of the sun.

If the effect in the change of the angle of the sun's rays on the earth's surface were instantaneous, our coldest period would be at the winter solstice and our warmest period at the summer solstice, but because of the blanket of atmosphere

around the earth and the cumulative effect in the heating or cooling of the earth's surface, we have "the lag of the seasons," which brings our warmest and coldest periods some 5 or 6 weeks after the sun is "farthest north" or "farthest south."

### Seasons for the Northern Hemisphere, 1957

Eastern Standard Time

March 20,	4:17 P.M.	Sun enters sign of Aries; spring begins.
June 21,	11:21 A.M.	Sun enters sign of Cancer; summer begins.
Sept. 23,	2:27 A.M.	Sun enters sign of Libra; autumn begins.
Dec. 21,	9:49 P.M.	Sun enters sign of Capricornus; winter begins.

### Planet Table

	Mean distance from sun in millions of miles	Period of revolution around the sun	Eccentricity of orbit	Inclination to ecliptic	Diameter miles	Period of rotation on axis	Inclination of equator to orbit plane	Surface gravity (earth = 1)	Oblateness	Mean velocity in orbit mi./sec.	Max. stellar mag.
Sun.....					865,390	24 <sup>d</sup> 64 <sup>h</sup> †	7.2	28	0		-26.7
Moon.....		(27 <sup>d</sup> 322 <sup>h</sup> )*	0.05	5 8	2,159.9	27 <sup>d</sup> 322 <sup>h</sup>	6.7	0.16	0	0.63	-12.6
Mercury.....	36.00	87 <sup>d</sup> 969	0.21	7 0	3,008.5	88 <sup>d</sup>	7	0.28	0	30	-1.2
Venus.....	67.27	224 <sup>d</sup> 701	0.01	3 24	7,575.4	? †	?	0.85	0	22	-4.4
Earth.....	93.00	365 <sup>d</sup> 256	0.02	0 0	7,926.7§	23 <sup>h</sup> 56 <sup>m</sup>	23.4	1.00	1/297	18.5	.....
Mars.....	141.71	1 <sup>y</sup> 881	0.09	1 51	4,215.6	24 <sup>h</sup> 37 <sup>m</sup>	25.2	0.38	1/192	15	-2.8
Jupiter.....	483.88	11 <sup>y</sup> 862	0.05	1 18	88,698§	9 <sup>h</sup> 50 <sup>m</sup> †	3.1	2.6	1/15	8	-2.5
Saturn.....	887.14	29 <sup>y</sup> 458	0.06	2 29	75,060§	10 <sup>h</sup> 14 <sup>m</sup> †	26.8	1.1	1/9.5	6	-0.4
Uranus.....	1783.98	84 <sup>y</sup> 013	0.05	0 46	30,878	10 ¾ <sup>h</sup>	98	0.9	1/14	4	+5.7
Neptune.....	2795.45	164 <sup>y</sup> 793	0.01	1 46	27,700	15 <sup>h</sup> 8	29	1.1	1/40	3	+7.8
Pluto.....	3675.27	248 <sup>y</sup> 430	0.25	17 9	3,600	??	??	??	??	<3	+14

\* Period of revolution around the earth. † This is the rotation at the equator. ‡ Rotation of Venus is uncertain but is probably a few weeks. § The equatorial diameters of the earth, Jupiter, and Saturn are given; polar diameters are: earth, 7900.0 mi., Jupiter 82,789 mi., Saturn 67,170 mi.

SATELLITES. The number of known moons in the solar system is now as follows: for the earth 1; Mars 2; Jupiter 12; Saturn 9; Uranus 5; Neptune 2.

OTHER DATA ON THE EARTH: Equatorial circumference, 24,902.4 mi.; total area, 196,949,970 sq. mi., mass, 5.6 sextillion tons.

### The Moon

Mars has 2 small satellites or moons, Jupiter has 12, Saturn 9, Uranus 5, and Neptune 2; but the earth has one comparatively large satellite, commonly called the moon. It is a globe 2,160 mi. in diameter with a surface deeply pitted by great craters. It has no atmosphere that astronomers can detect and shines only by reflected light of the sun. Though it seems very bright to us at "full moon," it reflects only about 7% of the light from the sun.

The orbit of the moon is elliptical, with the earth at one focus. The distance of the moon from the earth varies from 221,463 mi. (perigee) to 252,710 mi. (apogee), the average being 238,857 mi. The curious thing about the moon is that it revolves around the earth in 27 days, 7 hr., 43 min., 11.47 sec., and rotates on its axis in exactly the same time, which is why we always see the same side of the moon. Because of what are known as "librations in latitude and

longitude" and also a "diurnal libration," we do see "around the edge of the moon" at different times. In this manner a total of 59% of the moon's surface has been observed, but the other 41% never has been seen by the human eye.

Although the moon revolves around the earth in approximately 27½ days, it is, on the average, a matter of 29½ days (29 days, 12 hr., 44 min., 2.78 sec.) from one new moon to the other, because the earth is moving around the sun while the moon is moving around the earth and the "new moon" depends upon the relative positions of the 3 bodies.

If the planes of orbit of the earth and the moon coincided, there would be an eclipse of the moon at every "full moon" and an eclipse of the sun at every "new moon," but the 5° angle between the planes of orbit of the earth and the moon causes the moon on most of its revolutions to miss the earth's shadow and the moon's

## Astronomical Constants

1 light-year	5,880,000,000,000 m
velocity of light	186,272 mi./sec
astronomical unit or distance earth-to-sun	93,003,000 m
mean distance, earth to moon	238,860 m
general precession	50".2
obliquity of the ecliptic	23° 27' 8".26—0".4684( <i>t</i> —1900)
equatorial radius of the earth	3963.34 statute m
polar radius of the earth	3949.99 statute m
earth's mean radius	3958.89 statute m
oblateness of the earth	1/297
equatorial horizontal parallax of the moon	57' 2".7
earth's mean velocity in orbit	18.5 mi./sec
sidereal year	365 <sup>d</sup> .256
tropical year	365 <sup>d</sup> .242
sidereal month	27 <sup>d</sup> .321
synodic month	29 <sup>d</sup> .530
sidereal day	23 <sup>h</sup> 56 <sup>m</sup> 4 <sup>s</sup> .091 of mean-solar time
mean solar day	24 <sup>h</sup> 3 <sup>m</sup> 56 <sup>s</sup> .555 of sidereal time

\* *t* refers to the year in question, for example 1948.

shadow on most trips to miss falling onto the earth.

The tidal effects of the moon are well known. The "spring tides" occur at the "full moon" and "new moon" and the "neap tides" at first quarter and last quarter.

### Meteors and Meteorites

Meteorites are meteors that have come down to Earth. Meteors are masses of mineral or metal or both that plunge into the Earth's atmosphere at great speed and become incandescent from the resultant friction so that they are seen in the sky as "fireballs" (bolides) or "shooting stars". The "fireballs" are the larger, make a greater flash across the sky and sometimes explode. Meteors come in all sizes but most of them verge on the microscopic and burn up completely in the flash that makes them visible from 40 to 60 miles above the Earth's surface. Millions of them enter our atmosphere every twenty-four hours and probably not more than one or two a day survive to strike the ground as meteorites.

The largest meteorite ever found is located near Grootfontein, Southwest Africa, and its weight is estimated between 50 and 70 tons. The second largest meteorite (the Ahnighito, weight 34 tons) was found by Admiral Peary, Arctic explorer, at Cape York, Greenland, and is now on exhibition in the Hayden Planetarium, New York City. The largest meteorite found on United States soil is the Willamette (weight 1½ tons), which fell near Portland, Oreg., and is now in the American Museum of Natural History, New York City.

Craters produced by the fall of meteorites have been found in many countries. The first to be recognized and the largest known is Meteor Crater in Arizona, a depression about 4,000 feet in diameter, about 600 feet deep, and with exterior walls rising

150 feet above the surrounding plain. Meteor craters have been found near Odessa, Texas; Haviland, Kansas; in the Arabian Desert; in Central Australia and—a notable group of fifty or more—in the region of the Stony Tunguska River in northern Siberia.

Many meteors travel in swarms, believed in some cases to be disintegrated comets. The Perseid shower that occurs annually Aug. 10–14 is thought by some astronomers to be all that remains of Tuttle's Comet and the Leonid shower, which reaches its maximum in mid-November every 33 years, similarly is suspected of being what is left of Tempel's Comet. The Leonid shower of 1833 was the greatest meteor display of which astronomers have record.

### Eclipses in 1957

(1) *Annular eclipse of the sun*, Apr. 24. The short path of the annular phase passes in a curve across Novaya Zemlya, north of Russia. Partial phases are visible in the eastern part of Asia, the northern part of Greenland, and the northwestern section of North America. The time of mid-partial eclipse and the magnitude of the eclipse for selected stations are as follows:

	time	mag.
Fairbanks, Alaska	3:00 P.M., 150° time	0.5
Portland, Oreg.	5:43 P.M., P.S.T.	0.1
Helena, Mont.	6:43 P.M., M.S.T.	0.2
Denver, Colo.	6:50 P.M., M.S.T.	< 0.1
Bismarck, N. D.	7:41 P.M., C.S.T.	0.2

(2) *Total eclipse of the moon*, May 1. Visible in the eastern hemisphere and, in the last stages, from some localities on the eastern coast of North America. For example, at New York the moon does not rise until 7:03 P.M., E.S.T., and the moon leaves the umbra at 7:17 P.M. At Eastport, Maine, moonrise occurs at 6:46 P.M., E.S.T. giving ½ hour of partial eclipse.



## Important Meteor Showers

Date	Meteor stream	Radiant in constellation
Jan. 1-4	Quadrantids.....	Boötes
Feb. 5-10	Alpha Aurigids.....	Auriga
Mar. 10-12	Zeta Boötids.....	Boötes
Apr. 19-23	Lyrids.....	Hercules
May 1-6	May Aquarids.....	Aquarius
May 30	Eta Pegasids.....	Pegasus
June 27-30	Pons-Winnecke meteors.....	Draco
July 14	Alpha Cygnids.....	Cygnus
July 26-31	Delta Aquarids.....	Aquarius
Aug. 10-14	Perseids.....	Cassiopeia
Aug. 10-20	Kappa Cygnids.....	Cygnus
Aug. 21-31	Zeta Draconids.....	Draco
Sept. 22	Alpha Aurigids.....	Auriga
Oct. 2	Quadrantids.....	Boötes
Oct. 9	Giacobinids.....	Draco
Oct. 18-23	Orionids.....	Orion
Nov. 14-18	Leonids.....	Leo
Dec. 10-13	Geminids.....	Gemini

(3) *Total eclipse of the sun*, Oct. 23, universal time. The path of totality extends in a short arc in the Weddell Sea, Antarctica, and touches the land at the Caird coast region, west Antarctica.

(4) *Total eclipse of the moon*, Nov. 7, visible in general in the Pacific Ocean and Asia, and the beginning phases in western North America. The moon sets too soon for visibility of eclipse in the eastern section. At Denver, the moon enters the umбра at 5:43 A.M., M.S.T., and the moonset time is 6:32 A.M. At San Francisco, total eclipse begins at 6:12 A.M., P.S.T., and moonset occurs at 6:38 A.M.

## The Atmosphere

The atmosphere of the Earth—the blanket of air that surrounds our globe and is essential to life—is of interest to astronomers because of its effect on the light that comes to us from heavenly bodies. Air has weight and volume. It refracts (bends or changes the direction of) light rays that enter it. Due to this refraction, we are able to see the Sun and the Moon before they rise and after they set. The “twinkling” of the stars is caused by convection currents in the air that have a rapidly changing refractive effect on the light from the stars. Our twilight is produced by the diffusion in the atmosphere of light from the Sun when it is below the horizon. Meteors become visible when they are heated to incandescence by friction with the atmosphere when, from outer space, they plunge into it at terrific speed.

Prof. Carl Störmer of the University of Oslo measured the height of the atmosphere and found it to be more than 600 miles, but about half of it by weight is below 18,000 feet. Although we may remark blandly that something is “as light as air,” the Earth’s atmosphere in bulk is of such

enormous weight that at sea level it exerts a pressure of approximately 14.7 pounds per square inch. At higher levels, of course, the pressure is less.

Chemically, the atmosphere is composed of nitrogen (approximately 78 per cent by volume), oxygen (approximately 21 per cent by volume), and extremely minor amounts (about 1 per cent in all by volume) of argon, neon, helium, hydrogen and carbon dioxide. There is also present in the air a varying amount of water vapor, which is known as humidity and is distressing when the percentage is high in warm weather.

## Projection Planetaria

Adler Planetarium, 900 E. Achsah Bond Drive, Chicago, Ill.  
Director, Wagner Schlesinger.

Fels Planetarium, 20th St., Benjamin Franklin Pkwy., Philadelphia, Pa.  
Director, I. M. Levitt.

Griffith Planetarium, Los Angeles, Calif.  
Director, Dinsmore Alter.

Hayden Planetarium, 81st St., Central Park West, New York, N. Y.  
General Manager, Joseph M. Chamberlain.  
Buhl Planetarium, Federal and West Ohio Sts., Pittsburgh, Pa.  
Director, Arthur L. Draper.

Morehead Planetarium, University of North Carolina, Chapel Hill, N. C.  
Manager, A. Jenzano.

Morrison Planetarium, Golden Gate Park, San Francisco, Calif.  
Manager, George W. Bunton.

Seymour Planetarium, Museum of Natural History, Springfield, Mass.  
Director, Frank D. Korkosz.

## Notable Telescopes of the World

### Refractor Telescopes

Size in inches	Observatory	Location
40	Yerkes	Williams Bay, Wis.
36	Lick	Mt. Hamilton, Calif.
32.7	Paris (Univ. of)	Meudon, France
31.5	Astrophysical	Potsdam, Germany
30	Allegheny	Pittsburgh, Pa.
30	Bischoffsheim	Nice, France
30	Poulkova	Leningrad, U.S.S.R.

### Reflector Telescopes

200	Palomar	Palomar Mt., Calif.
100	Mt. Wilson	Pasadena, Calif.
82	McDonald	Mt. Locke, Texas
74	Dunlap	Richmond Hill, Ont.
72	Lord Ross (dismantled)	Parsonstown, Ireland
72	Dominion Astrophysical	Victoria, B. C.
69	Perkins	Delaware, Ohio
61	Harvard	Harvard, Mass.
60	Bloemfontein	Bloemfontein, U. of S. Af.
60	Mt. Wilson	Pasadena, Calif.
60	Córdoba	Bosque Alegre, Argentina

# THE OTHER NATIONS OF THE WORLD



A GUIDE TO MAIN HISTORICAL, POLITICAL, ECONOMIC,  
GEOGRAPHIC AND SOCIAL FACTS

*Prepared by the Staff of* **ENCYCLOPAEDIA BRITANNICA**

*Under the direction of*  
**WALTER YUST, Editor-in-chief**

A record of later events may be found in the section: **NEWS RECORD OF 1956.**

## **Afghanistan (Kingdom)**

Area: 250,966 square miles.\*

Population (est. 1953): 13,000,000\*  
(Pushu, 60.5%; Tajik, 30.7%; Uzbek, 5%;  
Mongolian and others, 3.8%).

Density per square mile: 51.8.

Ruler: Mohammed Zaher Shah.

Prime Minister: Mohammed Daud Khan.

Principal cities (est. 1953): Kabul, 310,-  
000 (capital); Kandahar, 80,000 (trading  
center); Herat, 75,000 (farming center).

Monetary unit: Afghani.

Languages: Pushu (official), Persian.

Religion: Mohammedan (Sunni, 90%;  
Shi'ah, 10%).

\* Unofficial estimate (no census ever taken).

**HISTORY.** Wedged between Pakistan, Iran and the U.S.S.R. in southwestern Asia without outlet to the sea, Afghanistan did not become an independent state until 1747. Previously, it had been either a cluster of small states under nominal Arab rule, part of Mongol or Mogul empires, or dismembered among India, Persia and the Uzbeks. By the 19th century it had passed into the British sphere of influence.

In 1880, Great Britain recognized Abdur Rahman Khan as Emir and gave him an annual subsidy of more than \$500,000 to delegate management of his foreign relations to Britain. His son, Habibullah, succeeded him in 1901 and kept Afghanistan neutral in World War I despite strong pressure of pro-Turkish elements.

On Aug. 8, 1919, a treaty was signed making Afghanistan free and independent of all British control. The country maintained strict neutrality in World War II, and was admitted to the United Nations in Nov. 1946. Relations with Pakistan have been strained by a dispute over areas

inhabited by the Pathans in the North West Frontier Province.

**GOVERNMENT.** Under the 1932 Constitution, Afghanistan is a constitutional monarchy, with authority vested in the sovereign and Parliament, which has a Senate of 50 members, who are named for life by the sovereign, and a National Assembly of 171 elected members. Executive power is exercised by the sovereign and Cabinet headed by the Prime Minister.

Military service is compulsory. The army strength is about 75,000, supplemented by tribal bands. There is a small air force.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is nominally compulsory. Primary schools exist in many parts of the country, but secondary schools only in Kabul and provincial capitals. There were 100,250 pupils in 334 elementary schools in 1951. There were also 32 secondary schools and a university at Kabul.

Only a fifth of the soil is under cultivation, the greater part of the country being mountainous and rocky. Farming is confined to the fertile valleys and plains sometimes with the aid of irrigation. Two crops a year are usually grown. Important ones include fruits and nuts, castor beans, cereals, madder, tobacco, cotton and vegetables. Wheat is the staple food. The fat-tailed indigenous sheep is a principal source of meat and wearing apparel.

Industry is still in a primary stage of development. Manufactures include cotton and woolen textiles and clothing, soap, leather, matches, beet sugar and furniture.

Among the leading exports are karakul skins (mostly to the U.S.), cotton, wool, rugs, carpets, spices and dried fruits. Mos-

of the trade normally is carried on through Pakistan; wool and cotton are exported to the U.S.S.R. in return for consumers' goods. Exports in 1954 (excluding the U.S.S.R., Communist China and other people's republics) were about U. S. \$40,143,000; imports were \$25,343,000.

Afghanistan has no railways or navigable streams. Camels and pack horses are still used by the natives, but motor transport is of increasing importance. The principal trade routes lead south through the Khyber and Khojak Passes to Pakistan, and north to the Uzbek and Turkmen Soviet Socialist Republics. There are about 4,000 miles of roads suitable for motor transport.

Both mineral and forest resources are largely unexploited. There are deposits of beryllium, chromite, coal, copper, gold, iron ore, lapis lazuli, oil, silver and sulfur.

**NATURAL FEATURES; CLIMATE.** Afghanistan, approximately the size of Texas, is split east to west by the Hindu Kush range of the Himalayas, rising in the east to heights of 24,000 feet. Except in the southwest, most of the country is covered by high snow-capped mountains and deep valleys. The few passes are deep and narrow. The climate ranges from extremes of below zero to more than 100° in the north; however, it is not so extreme in the south, although snowfall is heavy all over the country in winter. Rainfall, chiefly in the north, is relatively light.

## Albania (People's Republic)

(Republika Popullore e Shqipërisë)

Area: 11,100 square miles.

Population (census 1955): 1,394,310 (Albanian 99.8%; others, 2%).

Density per square mile: 125.6.

Chairman of Presidium: Hadji Leshi.

Premier: Mehmet Shehu

Principal cities (est. 1949): Tirana, 0,000 (capital); Scutari, 30,000 (northern trading center); Koritsa, 28,000 (farming center).

Monetary unit: Lek.

Language: Albanian.

Religions (est. 1953): Moslem, 65%; Greek Orthodox, 23%; Roman Catholic, 1%; others, 1%.

**HISTORY.** A tiny, backward state approximately the size of Maryland, Albania has acquired considerable importance since World War II because of its close ties with the Soviet Union and its strategic location at the mouth of the Adriatic. After the fall of the Roman Empire, Albania became part of the Byzantine Empire and was successively invaded by Goths, Serbs and Bulgarians. From 1014 to 1204 it was again under Byzantine rule. An alliance of Albanian chieftains (1444-66) under Skanderbeg failed to halt the advance of the Turks,

and the country remained under at least nominal Turkish rule for more than four centuries, until it proclaimed its independence on Nov. 28, 1912.

During World War I Albania was variously occupied by Italian, Greek, French, Serb and Austro-Bulgarian forces. On Aug. 2, 1920, Italy recognized Albanian independence and evacuated the country. Ahmed Zogu, Premier in 1922-23, ousted the government of Mgr. Fan Noli in 1924 and became President of a newly constituted republic in 1925. Three years later, after concluding pacts which placed Albania in Italy's sphere of influence, Zogu proclaimed himself King Zog I.

In 1939, Italy occupied the country in a matter of days. During the Greco-Italian war of 1940-41, the Greek armies pushed the Italians back from the Albanian border and occupied a large part of southern Albania. When Germany attacked Greece and Yugoslavia in April 1941, however, the Greeks withdrew quickly, and the Axis occupation of Albania was complete.

Albania was free of the Axis yoke by the end of 1944, and a leftist provisional government under Colonel General Enver Hoxha was established. That regime was confirmed in power by subsequent elections and full Soviet recognition, although provisional British and U. S. recognition was withdrawn in 1946. Since then, Albania has collaborated closely with the Soviet Union. It was admitted to the U.N. in 1955.

**GOVERNMENT.** Under its 18<sup>th</sup> Constitution, Albania has a typical Soviet government. Supreme power is vested in the popularly elected National Assembly, to which the Cabinet, headed by the Premier, is responsible. The army, estimated (1955) at 30,000 men, has liaison with the U.S.S.R.

**SOCIAL AND ECONOMIC CONDITIONS.** Primary education is nominally compulsory, but illiteracy is high, especially among women. There is a teachers' college at Tirana.

Albania is still a primitive country where each family tries to provide most of its own needs. Nearly the whole population is engaged in combined farming and stock-raising. Only a small portion of the central part is fit for tilling. Corn is the chief crop. Others are wheat, tobacco, oats, barley, rye, spelt, olives and citrus fruit. Factories produce food products, cement and textiles; a large dam and power station was completed near Tirana in 1950.

Albania's postwar trade has been limited for the most part to the Soviet bloc. Important exports include crude oil, copper and chrome ore.

Railway mileage totaled only about 81 in 1951, linking Durazzo with Tirana and Elbasan. Good highways were developed by the Italians for strategic purposes, and the



Russians continued such construction. The only fully equipped port is Durazzo.

Mineral wealth, thought to be considerable, is relatively unexploited. The principal mineral is petroleum (production 1954: about 1,600,000 bbl.). Others include asphalt, bitumen, bauxite, chromite, copper, lignite and pyrites.

**NATURAL FEATURES; CLIMATE.** Albania is a mountainous state, largely over 3,000 ft. above sea level, with a narrow marshy coastal plain crossed by several rivers. The interior mountain plateaus and basins contain the centers of population.

The climate is typically Mediterranean, with dry, hot summers and moderate winters. Inland temperatures are lower than those on the coast.

## Arabia

The Arabian peninsula is at the southwest extremity of Asia. Its rich oil deposits and proximity to Palestine gave it special importance after World War II. Once a political unit, today it consists of the kingdoms of Saudi Arabia and Yemen, the British colony of Aden and six British protectorates.

The peninsula, with an area more than three times that of Texas, and an extreme length of 1,400 miles, is generally a plateau sloping gently eastward from a mountain range that averages 5,000 feet in elevation and runs along its entire west side within ten or fifteen miles of the Red Sea. The range reaches a maximum of 12,336 feet in Yemen to the southwest. Arabia has no rivers and no forests and is principally a desert dotted with many oases.

Most of the peninsula, particularly the interior, has a hot desert climate with frequent changes in temperature. The highlands of the Yemen and southwestern Saudi Arabia, however, together with parts of Oman, have a temperate climate. Jidda, on the Red Sea, has an average daily high temperature of 93° during August. Rainfall is almost nonexistent, amounting at Aden to less than two inches annually.

Mohammed united all Arabs in the 7th century A.D., and his followers, led by the caliphs, founded a great empire with its capital at Medina. Later, the caliphate capital was transferred to Damascus and then Baghdad, but Arabia retained its importance because of the holy cities of Mecca and Medina. In the 16th and 17th centuries, the Turks established at least nominal rule over much of Arabia, and in the middle of the 18th century it was divided into separate principalities.

Through agreements with local rulers, the British extended their rule over the southern and eastern coasts in the 19th century. At the same time, the Wahhabs,

a religious sect advocating strict adherence to Mohammed's teachings, gained control over most of central and eastern Arabia, and their work was the beginning of the present Saudi Arabia.

## POLITICAL DIVISIONS OF ARABIA

Name	Area (sq. mi.)	Population (est. 1954)
Aden colony (British)	108	138,441
Aden protectorate*	112,000	800,000
Bahrein Islands		
(Sultanate)*	231	120,000
Kuwait (Sheikdom)*	8,000	200,000
Oman and Masqat		
(Sultanate)*	82,000	550,000
Qatar (Sheikdom)*	8,500	30,000
Saudi Arabia		
(Kingdom)	617,760	7,000,000
Trucial Coast (Sheikdoms)*	5,792	80,000
Yemen (Kingdom)	75,290	4,500,000

\* British protectorate. † 1955 census. ‡ Estimated 1952.

Aden and Bahrein Islands. See  
British Commonwealth: Asia

## Kuwait (Sheikdom)

Kuwait, on the northwestern shore of the Persian Gulf, is an independent state ruled by Sheik Abdullah as-Salim as-Subah. British protection, first exercised in 1898, has several times prevented it from being absorbed by Saudi Arabia. The territory surrounding Al Kuwait, its port, is largely desert; its trade consists of exchanging Arab goods from the interior for textiles, rice, sugar and other necessities. Kuwait's petroleum reserves, estimated at 9 billion barrels, are under concession to the Kuwait Oil Co. Ltd. (owned jointly by Gulf Oil Corp. and British Petroleum Co. Ltd.) which pays one-half its profits to the Sheik. Production, which began only in 1945, totaled 398,816,000 barrels in 1955. Production is concentrated at the Burgan field, from which petroleum is piped to the new port of Ahmadi for shipment.

South of Kuwait on the Persian Gulf is the Saudi Arabian-Kuwait neutral zone which under the Treaty of Uqair (1922) belongs in undivided one-half interest to Kuwait and Saudi Arabia. It consists of about 2,000 sq. mi. of uninhabited desert. Oil was discovered in 1953 by American Independent Oil Co. Production totaled 8,847,769 barrels in 1955.

## Oman and Masqat (Sultanate)

Occupying the mountainous southeastern part of the peninsula, Oman is nominally an independent state under the rule of Sultan Sayyid Sa'id bin Taimur. It has been under British protection since the 19th century. The state is best known for its date cultivation, and its riding camels are considered the best in the world. Trade

s mainly to and from India. The capital is Masqat (population 1954: 5,500).

### **Qatar (Sheikdom)**

Qatar occupies the whole of the Qatar peninsula in the Persian Gulf. It is ruled, under British protection, by Sheik Ali bin Abdullah al-Thani. The whole area is claimed by Saudi Arabia. Oil deposits are being exploited by a subsidiary of the Iraq Petroleum Co.; output in 1955 was about 1,850,000 barrels.

**Saudi Arabia.** See Saudi Arabia.

### **Trucial Coast (Sheikdoms)**

This area, extending along part of the Gulf of Oman and the southern coast of the Persian Gulf, is ruled by 7 semi-independent sheiks. Treaties signed with Britain in 1853 and 1892 provided that the sheiks should not cede or sell any part of their land to any other power.

**Yemen.** See Yemen.

## **Argentina (Republic)** (República Argentina)

Area: 1,084,359 square miles.

Population (est. 1955): 18,919,000 (approximately 97% of European descent, chiefly Spanish and Italian; 3% Indian and other).

Density per square mile: 17.4.

President (provisional): Maj. Gen. Pedro E. Aramburu.

Principal cities (est. 1955): Buenos Aires, 5,555,000 (capital and chief port); (est. 1950) Rosario, 467,937 (flour milling); Córdoba, 369,886 (northwest farming center); Villaneda, 278,621 (industrial suburb of Buenos Aires); La Plata, 207,031 (seaport, meat packing); Lanús, 244,473 (suburb of Buenos Aires).

Monetary unit: Peso.

Languages: Spanish (official), Italian.

Religions (census 1947): Roman Catholic, 2.7%; Protestant, 1.9%; Jewish, 1.6%; others and unknown, 3.8%.

**HISTORY.** Discovered in 1516 by Juan Díaz de Solís, Argentina developed slowly under Spanish colonial rule. Buenos Aires was settled permanently in 1580 and became a prosperous city; the cattle industry of the Argentine pampas was thriving as early as 1600.

Invading British forces were expelled in 1806-07, and when Napoleon conquered Spain, the Argentinians set up their own government in the name of the Spanish king in 1810. On July 9, 1816, independence was formally declared. Internal dissension, particularly between Buenos Aires and the provinces, was put down under the dictator Juan Manuel de Rosas, who brought about unification from 1829 to 1852. Rosas was

overthrown by Justo José de Urquiza, who became the first President under the 1853 Constitution, modeled after that of the U. S.

President Hipólito Irigoyen (1916-22) refused to abandon Argentinian neutrality in World War I. Re-elected in 1928, Irigoyen, a radical, was ousted two years later by a conservative revolution led by General José Uriburu. The latter's successor, General Agustín Justo (1932-38) followed a moderate policy and undertook a large public works program.

Argentina proclaimed neutrality at the outbreak of World War II, but in general co-operated in hemispheric defense programs. In the closing months of the war, the nation declared war on the Axis (March 27, 1945) and signed the Act of Chapultepec the following April 4. Diplomatic recognition and admission to the U. N. followed. Juan D. Perón, then an army colonel, emerged as strongman and won the 1946 presidential elections. Congress became completely controlled by Perón supporters. Perón was re-elected Nov. 11, 1951, in an election in which the opposition was denied freedom of speech, press and assembly.

Long-smouldering opposition, fanned by worsening relations with the Catholic Church, finally resulted in Perón's overthrow in Sept. 1955 in a coup led by the armed forces. Maj. Gen. Eduardo Lonardi became provisional President on Sept. 23; he was replaced by Maj. Gen. Pedro E. Aramburu on Nov. 13. Perón fled to Paraguay and then Panamá; his party as well as the Congress was dissolved.

**GOVERNMENT; DEFENSE.** Argentina is a federal union of 22 provinces and the federal district. Under the Constitution of 1853 (restored by decree on May 1, 1956), the President and Vice President are elected every 6 years by electors who are chosen by direct vote. The President appoints his Cabinet. The Vice President presides over the Senate but has no other powers. Neither is eligible for immediate re-election. The Congress has two houses—a 46-member Senate elected by the provincial legislatures for 9-year terms and a Chamber of Deputies popularly elected for 4-year terms.

Each province has its own constitution, elected governor, legislature and judiciary, but the President may in a crisis take over the local government.

Under legislation enacted Nov. 29, 1946, all men and women 12 to 50 are subject to military service at the President's discretion. Service from 20 to 22 is compulsory. Active strength of the army is about 100,000 officers and men.

The air force has about 150 combat planes. The navy in 1955 included two

modernized battleships, five light cruisers and 15 fleet destroyers.

#### SOCIAL AND ECONOMIC CONDITIONS.

**Education.** Argentina's estimated illiteracy rate of 7-10 per cent is the lowest in all Latin America. Education is free, secular and compulsory between six and fourteen. In 1951 there were 15,874 primary schools with 2,446,138 pupils, 3,264 public and private secondary, normal and special schools with 521,132 students and 6 national universities with 90,201 students.

**Agriculture.** A farming and stock-raising nation, Argentina devotes some 40% of its area to pasture and 10% to cultivation. Cotton, sugar cane and fruits are important, and Argentina is the world's largest producer of yerba maté (Paraguay tea), the national beverage. The 1955 wine production was about 310,000,000 gallons (1950-54 average: 306,400,000 gallons).

Estimated crop production in the 1954-55 crop year, in metric tons, was as follows: wheat, 7,690,000; rye, 844,000; barley, 1,112,000; oats, 890,000; maize, 2,580,000; cotton, 346,000; linseed, 482,000.

Cattle raising predominates on the pampas, especially in Buenos Aires province. Sheep raising is more important in Patagonia. In 1952 there were 45,262,995 cattle, 54,683,731 sheep, 3,989,188 pigs, (1947) 7,237,663 horses. Wool production in 1955 was about 355,000,000 lb., greasy basis.

**Manufacturing.** Industrial expansion was accelerated during World War II by the shortage of imports, but industry is still closely allied to agriculture. The principal industry is meat refrigeration, followed by flour milling, textiles, sugar refining, dairy products, quebracho extraction and wine.

**Trade.** Argentina's trade position, favorable in the immediate postwar period, deteriorated as dollar exchange became scarcer. Trade statistics are as follows (in millions of pesos):

	1953	1954	1955
Exports	7,107.0	6,721.0	7,298.0
Imports	5,655.0	7,112.0	8,905.0

Leading exports in 1954 were cereals and linseed (31%), meat (20%), wool (11%) and hides (7%). Important imports included machinery (20%), fuel and lubricants (13%) and foodstuffs (11%). Leading customers were the United Kingdom (18%), the U. S. (14%), Germany (10%) and Brazil (9%); leading suppliers, the U. S. (14%), Brazil (12%), Germany (9%) and the United Kingdom (7%).

**Communications.** According to *Lloyd's Register*, the merchant fleet on June 30, 1955, was composed of 364 steamers and motorships (100 tons and over) aggregating 1,092,851 gross tons. Chief Argentine ports are Buenos Aires, second only to New York

in the western hemisphere, and La Plata both on the Plata estuary; and Rosario, port on the Paraná River.

Railway mileage is about 27,000, nearly all of which radiates outward from Buenos Aires. With the purchase in 1947-48 of the British- and French-owned railways the system became government-owned. Highway mileage is upwards of 300,000, largely unimproved. Telephones in Jan. 1954 totaled 1,001,158; broadcasting stations (1952) 68; radio sets (1953) 2,900,000. The air transport system is government-owned; domestic air routes extend as far south as Tierra del Fuego. Direct connections with the rest of the world are maintained by international airlines.

**FINANCE.** The 1956 budget, including public works but excluding autonomous institutions and special accounts, estimates expenditure at 23,354,000,000 pesos and revenue at the same amount, with 6,299,000,000 pesos to be covered by the issue of bonds. The net public debt on Dec. 31, 1954, was 41,684,000,000 pesos; this figure did not include the debt of official agencies and of provincial and municipal governments.

**NATURAL FEATURES AND RESOURCES.** Second in South America to Brazil in size and population, Argentina is about 2,070 miles long and 860 miles wide at the maximum. In general, it is a plain, rising from the Atlantic to the Chilean border and the towering Andes peaks, including Aconcagua, 22,835 feet, the highest peak in the world outside Asia. The northern area of the Argentine plain is the swampy and partly wooded Gran Chaco. South of that to the Río Negro are the rolling, fertile pampas, rich for agriculture and grazing, and supporting most of Argentina's population. Next southward is Patagonia, a region of cool, arid steppes with some wooded and fertile sections. The eastern part of Tierra del Fuego, the island southern tip of South America, belongs to Argentina.

The three great rivers which make up the Plata system—the Paraná, Paraguay and Uruguay—are important commercial arteries in northern Argentina. Rosario and Santa Fé, 260 and 360 miles respectively above Buenos Aires on the Paraná, are accessible to ocean vessels.

**Minerals.** Argentina must import most of nearly every mineral it uses. Oil produced in Patagonia (1955: 30,576,000 barrels), and there is small mining of tungsten, lead, gold, zinc, tin, silver and beryllium. The government announced discovery of uranium deposits in Feb., 1954. Coal and coke imports in 1955 amounted to 1,255,400 long tons.

**Forests.** The Gran Chaco area is the world's chief source of quebracho extra-



Total exports of this tanning agent obtained from quebracho logs in 1954 were 153,000 metric tons, part of which was re-exported from Paraguay. Other forest products—hardwoods, dyewoods, lignum vitae, red quebracho, medicinal gums and other tannins—are consumed locally for the most part.

**CLIMATE.** Except for the northern Gran Chaco, which has mild winters and torrid summers, Argentina lies in the south temperate zone. The pampas region has an average temperature of 60°, and freezing is rare. Temperature extremes increase progressively southward. All over Argentina, January is the warmest month and June and July are coolest. At Buenos Aires, the mean annual temperature in January-February is about 73°; in June-July, 50°. The heaviest rainfall, over sixty inches a year, hits the Gran Chaco, while on the pampas it ranges from twenty inches in the west to forty in the northeast; at Buenos Aires it is 37.2 inches.

## Austria (Republic)

(Österreich)

Area: 32,374 square miles.

Population (est. 1955): 6,974,000 (practically all Austrian).

Density per square mile: 215.4.

President: Dr. Theodor Koerner.

Chancellor: Julius Raab.

Principal cities (census 1951): Vienna, 1,766,102 (capital, industrial center); Graz, 226,453 (industrial center); Linz, 184,685 (Danube port); Salzburg, 102,927 (tourist center); Innsbruck, 95,055 (tourist center).

Monetary unit: Schilling.

Language: German.

Religions (census 1951): Roman Catholic, 89%; Protestant, 6%; others, 5%.

**HISTORY.** The history of Austria before World War I was largely that of the Austro-Hungarian Empire and the Hapsburgs. Its origin was in the province of Ostmark, separated from Bavaria and given to Leopold of Babenberg (A.D. 976) by the Holy Roman Emperor, Otto II. It was ruled by the Babenbergs until 1246, and later passed to Ottakar of Bohemia, who lost it to Rudolf of Hapsburg (1276). In 1437, the three kingdoms of Austria, Hungary and Bohemia were united under the rule of Albert V. For three centuries thereafter, despite almost constant warfare, the states remained for the most part under a single crown. The Hapsburgs gradually added to their possessions, until Charles V, during the 16th century, ruled a vast part of Europe. Emperor Francis I laid down the Holy Roman crown in 1806 at the height of the Napoleonic Wars, in which Austria with her allies was finally victorious. Influence in Germany was lost through defeat by Prussia in the Seven Weeks' War (1866). In 1867, the Dual Monarchy of

Austria and Hungary was established, united in the person of the sovereign, Franz Josef I, who ruled until 1916.

Following the defeat of the Central Powers in World War I, the republic of Austria was established in Nov. 1918. It was confined to its present borders by the Treaties of St. Germain (1919) and Trianon (1920). The years immediately following the war were a period of privation, dissension and riots, with Austrian currency becoming worthless and the nation bankrupt. Establishment of a semidictatorship by Engelbert Dollfuss, who had become Chancellor in 1932, was followed by an unsuccessful Socialist revolt (Feb. 1934) and an attempted Nazi *coup d'état*, which failed, although Dollfuss was killed. He was succeeded by Kurt von Schuschnigg, whose futile efforts to maintain Austria's independence ended (March 12, 1938) with the bloodless occupation of Austria by Germany. Hitler proclaimed the *Anschluss* of Germany and Austria the next day.

Following the liberation of Vienna by the Red Army (April 13, 1945), Dr. Karl Renner, veteran Socialist, formed a provisional government. Elections held Nov. 25, 1945, resulted in victory for the People's party, whose leader, Leopold Figl, became Chancellor. Dr. Renner was elected President of the Second Austrian Republic (Dec. 20, 1945). He died Dec. 31, 1950; Dr. Theodor Koerner, also a Socialist, was elected President May 27, 1951. Following the Feb. 1953 elections, Julius Raab of the People's party formed a new coalition Cabinet on Apr. 2.

After World War II, Austria within its 1937 frontiers was divided into 4 national zones, as was the city of Vienna. The 4 occupying powers (the U. S., the U.S.S.R., Britain and France) exercised control through the Allied Council for Austria.

Austria finally regained its independence on May 15, 1955, when a state treaty was signed with the 4 occupying powers. The U.S.S.R. exacted substantial economic concessions as the price for its consent; they included the delivery of 10,000,000 tons of oil over a 10-year period as well as the delivery of \$150,000,000 worth of goods over a 6-year period. Austria was admitted to the U.N. in 1955.

**NATIONAL GOVERNMENT.** Austria is a federal republic comprised of nine provinces (including Vienna), each of which has its own elected assembly for the control of regional affairs. The federal Parliament consists of two houses—the *Bundesrat* whose 50 members are chosen by the provincial assemblies and the *Nationalrat* whose 165 members are chosen by national election. The President of the republic is elected by national popular vote for a term of six years. The government is administered by the Chancellor

and his Cabinet. Party standing in the *Nationalrat* after the elections of May 13, 1956, was: People's party 82, Socialist 75, Independent 5, Communist 3.

**SOCIAL AND ECONOMIC CONDITIONS.** In 1954-55, Austria had 5,432 primary schools with 811,043 pupils, 297 secondary, technical and teachers' training schools with 109,079 pupils, and 14 institutions of higher learning, including 4 universities, with 19,954 students. Illiteracy is practically unknown.

Agriculture employs more than one-third of the population but the country is heavily dependent on imported food-stuffs. Mixed farming predominates. Rye and wheat are the leading cereals. Recent production figures are as follows (in metric tons):

	1953	1954	1955
Wheat	499,417	451,832	549,186
Rye	421,213	369,973	416,107
Oats	360,153	334,264	363,704
Barley	320,217	311,537	345,738
Potatoes	3,292,796	2,791,627	3,005,356
Beet sugar	1,058,123	1,344,625	1,438,902

Stock raising and dairy farming both in the Alpine pastures and the lowlands of the east are of importance. In 1955 there were 2,346,479 cattle, 2,933,433 hogs and 254,570 sheep.

Austria is primarily an industrial country. The metallurgical, engineering, textile and wood industries are most important. Styria is responsible for almost all the iron and steel production, which included in 1955 1,820,400 metric tons of steel and 1,508,400 tons of pig iron. Aluminum production was 67,850 tons.

Legislation providing for the nationalization of 70 firms, comprising a substantial portion of Austrian basic industry, was enacted in 1946. Most of the industrial regions are in the east.

Trade statistics are as follows (in millions of schillings):

	1953	1954	1955
Exports	13,190	15,852	18,169
Imports			
Commercial	12,352	16,478	23,013
ERP	917	510	55

Leading exports in 1955 were timber (20%), iron and steel and other metals (18%) and machinery and electrical equipment (13%). Leading suppliers in 1955 were western Germany (36%), the United Kingdom (10%), the U. S. (8%) and Italy (8%). Chief customers were western Germany (25%), Italy (17%), the United Kingdom (6%) and Switzerland (5%).

There were 3,750 miles of railway in 1953, partly electrified. Water traffic is restricted for the most part to the Danube River. The major river ports are Linz and, especially, Vienna, which is also an important rail, road and air center.

Recent government financial data are as follows (in millions of schillings):

	1954	1955*	1956*
Revenue	24,289	22,174	27,244
Expenditure	22,722	24,774	26,035

\* Budget estimate.

The postwar public debt totaled 13,670,-600,000 schillings in 1954.

**NATURAL FEATURES AND RESOURCES.** **CLIMATE.** Austria covers an area about equal to that of Scotland and includes much of the mountainous territory of the eastern Alps (about 92.3 per cent of the country is classified as mountainous). The country contains many snow-fields, glaciers and snow-capped peaks. The principal river is the Danube.

Austria possesses valuable mineral resources. In Styria lies one of the largest European deposits of iron ore. Copper is mined in Salzburg, Tyrol and lower Austria, and lead and zinc in Carinthia. Other minerals include bauxite, graphite, sulfur and manganese. Fuel resources comprise small coal deposits in lower Austria and large quantities of lignite, found everywhere except in Salzburg. Large supplies of coal and coke must be imported, but extensive water power resources are available for exploitation. Petroleum fields in the Zistersdorf and Mühlig areas both in eastern Austria, produced an estimated 24,250,000 barrels in 1955. Production of lignite in 1955 was 6,618,844 metric tons; coal, 171,000 tons.

Variety is the keynote of Austria's climate. The mean annual temperature in the north ranges between 45° and 48°, and in no month does the average exceed 68°. Most of the rainfall occurs during summer; it amounts to about 40 in. annually in most of the country. In the Tyrol, mild winters and warm summers are customary.

## Belgium (Kingdom)

(Royaume de Belgique—  
Koninkrijk België)

Area: 11,779 square miles.\*

Population (est. Dec. 31, 1955): 8,896,244 (Wallon, Flemish).

Density per square mile: 755.3.

Sovereign: Baudouin I.

Premier: Achille van Acker.

Principal cities (est. 1955, including certain suburbs): Brussels (Bruxelles), 981,636 (capital); Antwerp (Anvers), 605,733 (port and commercial center); Liège, 442,753 (iron and steel); Ghent (Gand), 229,703 (textiles).

Monetary unit: Belgian franc.

Languages (est. 1954): Flemish, 50% French, 34%; Flemish and French, 15% German, 1%.

Religion: Predominantly Roman Catholic.

\* Including small areas taken over from Germany 1949.

**HISTORY.** In 1914 and again in 1940, Belgium was crushed by German armies because its position in the Low Country area made it a highway on the invasion route to France. Highly industrial, a bit larger than Maryland and second most densely populated major European nation, Belgium emerged from World War II in fair economic condition; but, politically, the country suffered crisis after crisis in the struggle between conservatives and elements of the left, especially over the return of King Leopold III to the throne. Leopold returned to Belgium on July 22, 1950, but violent Socialist-led rioting forced him to agree to turn over his powers to his son, Baudouin. He formally abdicated July 16, 1951, and his son (born Sept. 7, 1930) became King as Baudouin I.

Perhaps the earliest mention of the Belgians in history was in 57-50 B.C., when they were conquered by Julius Caesar. In the Middle Ages the Belgian towns became wealthy and virtually autonomous as great textile centers. Belgium became part of Burgundy in 1385 and, later, part of the Spanish domains of Charles V. By the Treaty of Utrecht, in 1713, Belgium went to Austria, though retaining its autonomy, and from 1792 to 1815 it held a similar status under France. United with the Kingdom of the Netherlands by the Congress of Vienna in 1815, the Belgians revolted and proclaimed independence on Oct. 4, 1830, choosing as their sovereign Leopold of Saxe-Coburg. Taking the title of King Leopold I, he ruled 1831-65.

Belgium progressed peaceably under Leopold I and his son, Leopold II, who reigned from 1865 to 1909, and was succeeded by his nephew, Albert I (1909-34).

Despite heroic Belgian resistance under the personal leadership of Albert, the country was overrun by the Germans in 1914 and occupied throughout World War I. The treaty of 1919 gave Belgium the regions of Moresnet, Eupen and Malmédy, and a mandate over Ruanda-Urundi.

As World War II approached, Belgium built a strong series of fortifications, especially along the Albert Canal. But these defenses were no great obstacle to the Germans, who invaded the country for the second time in a generation on May 10, 1940.

King Leopold III, who had succeeded his father upon the latter's death in a mountain-climbing accident in 1934, ordered the Belgians to surrender to the Nazis and was taken prisoner on May 28, 1940—eighteen days after the first German attack. The Cabinet of Hubert Pierlot escaped from the country and set up a government-in-exile in London. When that government returned to Belgium on Sept. 7, 1944, King Leopold's brother, Prince Charles, was elected regent (Leopold was still a pris-

oner). In elections held June 4, 1950, the Christian Socialists won control of the Chamber of Deputies; succeeding Christian Socialist Cabinets were headed by Jean Duveusart (June 8), Joseph Pholien (Aug. 15) and Jean van Houtte (Jan. 15, 1952). The Christian Socialists lost their majority in the parliamentary elections of April 1954, and Socialist Achille van Acker formed a Socialist-Liberal Cabinet on April 22, 1954.

On March 17, 1948, Belgium signed a 50-year defense treaty with Britain, France, Luxemburg and the Netherlands; and in April 1949, the nation joined the North Atlantic alliance.

**GOVERNMENT AND DEFENSE.** Under the 1831 Constitution, Belgium is a constitutional monarchy. The ministers who constitute the Cabinet must have the confidence of Parliament, which consists of a 212-member Chamber of Deputies popularly elected and a Senate of varying membership, elected both directly and indirectly. All members serve for four years unless one or both houses are dissolved by the King, in which case new elections must be held in forty days. Belgium's nine provinces and 2,666 communes have Crown-appointed officials but retain considerable autonomy with their locally elected councils.

The election of Apr. 11, 1954, returned 95 Christian Socialists (as against 108 in the June 1950 election), 86 Socialists (77), 25 Liberals (20), 4 Communists (7) and 2 others to the Chamber of Deputies.

The authorized strength of the army in 1951 was 150,000, but the term of compulsory service was reduced in 1952. The air force has about 350 combat planes. The navy, abolished in 1928, was reformed after World War II and in 1955 had 1 frigate, 6 ocean and 26 coastal minesweepers, 1 auxiliary transport and various other minor craft.

**SOCIAL AND ECONOMIC CONDITIONS.**  
*Education.* Education, free and universal for children from six to fourteen, is under state control in three divisions: primary, intermediate and higher. Primary schools (Oct. 1953) numbered 8,745 with 826,328 pupils; secondary schools (1952), 774 with 140,047 students; technical schools, 1,513 with 176,766 students. There are four universities: official, Ghent and Liège; unofficial (private), Brussels and Louvain with a total of 17,879 students in 1953-54. There are also private schools, many under religious auspices. The rate of illiteracy in 1947 (7 years of age and over) was 3%.  
*Agriculture.* About 60% of the total area of Belgium is under cultivation, and one-half the farmed area is devoted to forage crops. Recent production figures for the country are as follows (in thousands of metric tons):



	1948-50.	1953	1954	1955*
Wheat	506	574	589	699
Oats	493	462	452	472
Barley	227	294	247	276
Rye	227	213	245	203
Sugar beets	2,207	2,389	2,132	2,232
Potatoes	2,166	1,919	2,634	1,766

\* Provisional.

Other crops are fodder beets, flax and fruit. The pastoral industry, especially dairy farming, flourishes. On Jan. 1, 1956, Belgium had 2,197,364 cattle, 1,347,491 hogs and 36,386 sheep.

**Manufacturing.** Belgium is one of the most highly industrialized nations in Europe, largely because of vast, readily accessible coal reserves. Steel production totaled 5,900,000 metric tons in 1955; pig iron, 5,490,000 tons.

The metallurgical, textile and building industries are important. Associated with iron and steel is a considerable engineering industry, shipbuilding in Antwerp, and machinery and railway stock in Brussels. The centuries-old textile industry produces linen (Courtrai); cotton (the southeast); and synthetic fibers. Antwerp, using the output of mines in the Congo and Angola, rivals Amsterdam in diamond cutting.

Foreign trade is especially vital to the Belgian economy. The Belgian-Dutch-Luxemburg customs union (Benelux), established on Jan. 1, 1948, is one of the five great trading areas in the world. Trade of Belgium and Luxembourg (in billions of francs) is as follows:

	1953	1954	1955*
Exports	112.5	115.2	139.0
Imports	120.2	127.5	142.2

\* Provisional.

Chief customers in 1955 were the Netherlands (20%), western Germany (12%), France (10%), the U. S. (9%), and Britain (6%). Leading sources of imports were western Germany (14%), the Netherlands (13%), France (12%), the U. S. (11%) and Britain (8%). Chief exports were iron and steel and products (27%), thread and fabric (7%), coal, coke and petroleum and products (7%) and copper and products (5%).

**Communications.** Inland transportation facilities are highly developed. Railroad mileage is 3,168. Navigable waterways total 998 mi., including the well-developed canal system. Before World War II, Belgium had the second largest river fleet on the Rhine. Highway mileage in 1953 totaled approximately 40,000. The merchant fleet on June 30, 1955, totaled 193 ships (100 tons and over) aggregating 497,536 gross tons, according to *Lloyd's Register*. Sabena, the government-controlled airline, flew 26,930,975 kilometers and carried 392,771 passengers in 1954.

**Finance.** Recent data are as follows (in billions of francs):

	1954	1955	1956
Revenue	106.4	81.7	85.4
Expenditure	96.3	100.8	95.0

\* Budget estimate.

The national debt, consolidated, short and middle term and at sight, totaled 332,872,572,922 fr. on Dec. 31, 1955.

**NATURAL FEATURES AND RESOURCES.** **CLIMATE.** The northern third of Belgium is a plain extending eastward from the coast of the North Sea. North of the Sambre-Meuse Rivers is a low plateau, varying from 250 to more than 600 feet in height; and to the south lies the Ardennes plateau, rising to a maximum of about 2,300 feet. The shallowness of the North Sea off Belgium precludes the development of good harbors; some of the port advantages of Antwerp, on the Schelde River, are offset by the fact that the approaches to it are through Dutch territory.

The principal mineral is coal; production in 1955 was 29,978,000 metric tons. The Ardennes coalfield, now nearly exhausted, extends southward into France. The Campine field lies in the northeast. Iron ore, lead and zinc also are mined principally in the Ardennes.

Forests cover about 20% of Belgium, but their products are relatively unimportant. Fishing is vital in the economy.

The climate is temperate. Ostend, on the sea, has an average annual temperature of 49° and annual rainfall of 27.5 inches about like that of Chicago. Baraque Michel in the Ardennes heights, has an average temperature of 43°, rainfall of 59.5 inches and considerable snow in the winter.

#### BELGIAN COLONIAL EMPIRE

Country	Area (sq. mi.)	Native pop.
Belgian Congo (colony)	904,991	12,317,326
Ruanda-Urundi (U. N. trust terr.)	20,742	4,261,900

\* March 1, 1955. † 1954.

#### BELGIAN CONGO—Status: Colony.

Capital: Léopoldville (population Dec. 31, 1954: 297,782; Europeans, 15,016).

Governor General: Léo Pétillon.

Monetary unit: Congolese franc.

Foreign trade (1955):\* exports, 23,361,868,000 fr. (51% to Belgium, 16% to the U. S.); imports, 18,951,870,000 fr. (36% from Belgium, 19% from the U. S.). Chief exports: copper (33%), coffee (9%), cotton (7%), palm oil (6%), diamonds.

Agricultural exports (1955, in metric tons):\* coffee, 43,679; cotton, 41,385.

Mineral production (1954, in metric tons): copper (smelter), 223,791; tin (ingots), 2,498; cassiterite, 15,604; diamonds (mainly industrial), 12,620,114 carats; gold (refined), 360,000 oz.; uranium.

**Forest exports (1955, in metric tons):\***  
palm oil, 150,274; palm kernels, 63,201;  
gum copal, 7,497; rubber, 26,084.

\* Including Ruanda-Urundi.

The mineral-rich Belgian Congo, in central Africa, with a narrow outlet to the Atlantic through the northwestern tip of Portuguese Angola, was acquired Nov. 15, 1908, by the Belgian state from the Belgian King, Leopold II. The latter had backed exploration of the area by the English explorer, H. M. Stanley, and in 1885 had been recognized by the great powers as personal sovereign and proprietor of the Congo Free State, as it was then called. The area is now administered by a Governor General responsible to the Cabinet minister for the colonies. The Governor General has unrestricted executive and legislative powers, and the colony has no representative institutions of its own. During World War II it furnished vital war materials to the Allies. The European population on March 1, 1955, was 88,972, of whom 69,524 were Belgians.

**RUANDA-URUNDI**—Status: U. N. trust territory, united administratively with the Belgian Congo.

Capital: Usumbura.

Governor General: Léo Pétillon.

Principal products: tin, coffee, gold, cotton, hides.

Ruanda-Urundi, in east Africa, was assigned to Belgium as a mandate by the League of Nations at the end of World War I, before which it was a portion of German East Africa. It is administered under the direction of the Governor General of the Belgian Congo by a Vice Governor General. The area, placed under U. N. trusteeship in Dec. 1946, is largely mountainous, with livestock grazing the principal native activity.

## Bhutan (Kingdom)

Area: 19,305 square miles.

Population (est. 1954): 300,000 (mostly Bhotiya).

Density per square mile: 15.5.

Ruler: Maharaja Jigme Dorji Wangchuk.

Capital: Punakha.

Monetary unit: Indian rupee.

Language: Tibetan dialect.

Religion: Buddhism.

**HISTORY.** Bhutan is a semi-independent state lying on the southeast slope of the Himalayas, bordered on the north and east by Tibet and on the south and west by the Republic of India. The area is said to have been invaded and settled by Tibetan troops in the 9th century A.D. After almost a century of conflict between the Bhutanese and the British in India, British troops invaded the country in 1865 and negotiated an agreement under which Britain undertook to pay an annual allowance to Bhutan

on condition of good behavior. A treaty signed with India in Aug. 1949 increased this subsidy and placed Bhutan's foreign affairs under Indian control.

Until 1907, Bhutan's government was under the dual control of the clergy and laity, but the country is now ruled by a hereditary Maharaja.

The dominant people are the Bhotiyas, who are of Tibetan origin, speak a Tibetan dialect, and profess the same form of Buddhism as is prevalent in Tibet.

**ECONOMIC CONDITIONS.** The chief crops are rice, corn and millet; the fields, laid out on hillside terraces, are watered by an ingenious system of irrigation. Bhutan is famous for its small though sturdy mountain ponies. The chief industries are metal work, cloth weaving and fine basket and mat work. Trade is insignificant, and much of it is conducted by barter.

**NATURAL FEATURES; CLIMATE.** The whole of Bhutan presents a succession of lofty and rugged mountains running generally from north to south and separated by deep valleys. Mountains in the north reach a height of 24,000 feet. The climate varies according to the topography. In the extreme south, rainfall amounts to as much as 200-300 inches annually.

## Bolivia (Republic)

(República Boliviana)

Area: 424,162 square miles.

Population (est. Dec. 31, 1955): 3,198,139  
(1950: Indian 52.9%, mestizo 32%, white 14.8%, others 3%).

Density per square mile: 7.5.

President: Hernán Siles Zuazo.

Principal cities (census 1950): La Paz, 321,063 (de facto capital); Cochabamba, 80,795 (commercial center); Oruro, 62,975 (tin mines); Potosí, 45,758 (mining); Sucre, 40,128 (legal capital).

Monetary unit: Boliviano.

Language: Spanish.

Religion: Roman Catholic.

**HISTORY.** Famous since Spanish colonial days for its mineral wealth, modern Bolivia was once a part of the ancient Incan Empire. After the Spaniards had defeated the Incas during the first part of the 16th century, Bolivia was subjected to the Spanish Viceroyalty of Peru, and its predominantly Indian population was reduced to slavery. During the successive South American revolts against Spain in the early 19th century, Upper Peru (as Bolivia was then called) was a vast battlefield contested by Spanish and patriot troops. The country finally won its independence in 1825; the new republic was named after Simón Bolívar, South America's famed liberator.

Bolivia's political history since independence has been extremely stormy. Since

1825 it has had more than 60 revolutions, 70 Presidents and 11 Constitutions. No elected President has served out his term.

Harassed by internal strife, Bolivia lost great slices of territory to three neighbor nations. Several thousand square miles and its outlet to the Pacific were taken by Chile after a disastrous war in 1879-83. In 1903 a piece of Bolivia's Acre province, rich in rubber, was ceded to Brazil. And in 1938, after a war with Paraguay, Bolivia gave up claim to nearly 100,000 square miles of the Gran Chaco.

Recent years have been typical of Bolivia's turbulent political history, with several illegal seizures of power culminating in a leftist revolution on July 21, 1946. Elections held May 6, 1951, were indecisive, although an exiled leftist, Victor Paz Estenssoro, obtained a near majority. A military junta which took over on May 16, 1951, was overthrown on April 11, 1952, and Paz Estenssoro became President on April 16. The three major tin mining companies were nationalized in Oct. 1952. Another leftist, Hernán Siles Zuazo, was elected President June 17, 1956.

**GOVERNMENT.** Under the 1938 Constitution, Bolivia is a republic, electing by popular vote a President every four years, a 27-member Senate every six years, and a 111-member Chamber of Deputies every four years. The President appoints the 10 members of his Cabinet. The Indian majority was virtually disfranchised until July 1952, when the franchise was conferred on all those who had reached the age of 20, whether literate or illiterate.

Military service is compulsory, with a two-year training period beginning at nineteen and service on reserve until fifty. The army is fixed by law at 15,000, and there are about 12,000 federal police.

**SOCIAL AND ECONOMIC CONDITIONS.** Bolivia has an illiteracy rate estimated in 1950 at 69%, the highest in South America. A contributing factor is the high proportion of pure Indian population. In 1952, enrollment at primary schools was reported to be 234,000 and at secondary schools, 24,000. There are five universities.

The 5,000,000 acres under cultivation produce wheat, rice, sugar, potatoes, cacao, barley, maize, coca (source of cocaine), tobacco and cotton. Production of such basic foodstuffs as wheat and rice, however, is insufficient for domestic needs, and considerable quantities must be imported. Cattle are raised in the more temperate regions of the east and south, sheep in the departments of La Paz and Cochabamba, and llamas, alpacas and vicuñas, important sources of hides, wool and meat, are raised on the plateaus by Indians whose economy is largely dependent upon them. The fur-bearing chinchilla, a native of the colder plateau regions, is also bred.

Tin and other minerals comprise almost the whole of Bolivia's exports. Since the country is landlocked, foreign trade must pass through free ports in Chile and river ports on the Amazon. Trade statistics for 3 years (in millions of U. S. dollars):

	1953*	1954*	1955*
Exports	112.8	94.3	96.5
Imports	68.0	65.5	77.

\* Partially estimated.

Chief exports in 1955 were tin (60%), tungsten (16%), lead (7%) and zinc (6%). Leading customers in 1954 were the U. S. (59%) and the United Kingdom (36%); leading suppliers, the U. S. (38%), Argentina (12%) and Peru (11%).

Railway mileage (1955) totaled 1,690, largely in western Bolivia; the principal lines connect La Paz with the Chilean ports of Arica and Antofagasta. Improved roads totaled 2,815 mi. in 1950; there were about 20,000 mi. of other roads. Airlines play an important role in Bolivian transportation. In the lowlands, thousands of miles of navigable streams are the chief means of transportation.

**NATURAL FEATURES AND RESOURCES.** **CLIMATE.** Landlocked Bolivia is a low alluvial plain throughout 60 per cent of its area toward the east, drained by the Amazon and Plata river systems. The western part, enclosed by two chains of the Andes, is a great plateau—the Altiplano—measuring 500 by 80 miles at an average altitude of 12,000 feet. More than 80 per cent of the population lives on the plateau, which also contains La Paz, the highest capital city in the world. Lake Titicaca, half the size of Lake Ontario, is one of the highest large lakes in the world, at an altitude of 12,507 feet. Islands in the lake hold ruins of the ancient Incan civilization.

Mining is the backbone of the economy. Tin, accounting normally for 70 per cent of Bolivian exports, is by far the most important mineral, most of it coming from the plateau regions of Potosí and Oruro. During World War II, Bolivia was the world's largest tin producer.

Mineral production in 1955 was: tin, 27,920 long tons; silver, 5,851,000 ounces; copper, 3,855 short tons; zinc, 23,500 tons. Antimony, gold, lead, manganese ore, tungsten concentrates, and mercury are also produced; and uranium deposits have been reported. Southern Bolivia is rich in oil, as yet relatively unexploited. Production in 1955 was about 2,690,000 barrels, five times the 1948-53 average.

From its lowland tropical forests, Bolivia gets rubber, quinine bark, almond and brazil nuts, dyewoods, mahogany, quebracho and other hardwoods. Rubber exports in 1953 were about 420 short tons.

The climate varies from the humid heat of the equatorial lowlands in the east to



the arctic cold of the Andean peaks. In the lowlands, the average temperature is about 70°, with no great departures; rainfall is fairly heavy throughout the year (30-50 inches or more). At higher elevations in the west (to 11,000 ft.) the climate is temperate, with occasional winter frost. In the great central plateau, the weather is always cool. In La Paz it averages about 54°; rainfall there averages about 23 inches annually.

## Brazil (Republic)

(Estados Unidos do Brasil)

Area: 3,287,195 square miles.

Population (est. July 1, 1955): 58,633,264. 1950: white, 61.7%; mestizo, 26.5%; Negro, 10.0%; other, 0.8%.

Density per square mile: 17.9.

President: Juscelino Kubitschek de Oliveira.

Principal cities (est. 1955): Rio de Janeiro, 2,725,274 (capital, chief port); (est. 1953) São Paulo, 2,500,000 (coffee and industrial center); Recife (Pernambuco), 1,000,000 (seaport); Salvador (Baía), 460,000 (seaport); Porto Alegre, 440,000 (seaport); Belo Horizonte, 430,000 (mining); Fortaleza (Ceará), 300,000 (seaport).

Monetary unit: Cruzeiro.

Language: Portuguese.

Religion: Roman Catholic, 95%.

**HISTORY.** Brazil, the only Latin American nation deriving its culture and language from Portugal, is by far the largest country in South America, covering nearly half the continent. In the Western Hemisphere it is second to Canada. In the world, it ranks after the U.S.S.R., China and Canada.

Brazil was discovered in 1500 by the Portuguese admiral, Pedro Alvares Cabral. Portuguese colonization efforts began in 1532 and Brazil became a royal colony seventeen years later. The later attempts of France and Holland to colonize Brazil were defeated by the Portuguese.

During the Napoleonic wars, the Prince Regent of Portugal (later King John VI) led his country in advance of the French armies, and set up his royal court at Rio de Janeiro in 1808. John was drawn home by a revolution in 1820 and the Brazilians, after holding the seat of Portuguese government, rebelled at resuming colonial status and declared their independence in 1822 under Pedro, son of John VI. Harassed by trouble with his parliament, Pedro I abdicated in 1831 in favor of his five-year-old son, who became Emperor in 1840 as Pedro II. He was a popular monarch.

Despite his good works, however, Pedro was forced to abdicate in 1889 following a military revolt, after which a republic was set up. Until 1893 Brazil was under

two military dictators, Marshal Deodoro da Fonseca and Marshal Floriano Peixoto. After a revolt against the latter in 1893, Brazil returned gradually to stability under a succession of civilian Presidents.

The President during World War I, Wenceslau Braz, co-operated with the Allies and declared war on Germany Oct. 26, 1917. Pres. Washington Luiz Pereira da Souza, 1926-30, had to cope with the world depression and was overthrown by a revolutionary group under Getúlio Vargas, who took over as provisional President.

Vargas' new Constitution in 1934 sharply curtailed state's rights and emphasized a nationalistic policy. In 1937 Vargas seized absolute power, setting up another Constitution which extended his term of office indefinitely. In World War II, Brazil co-operated well with the United Nations. Allied air bases were set up in Brazil, Brazilian naval forces patrolled the South Atlantic, and a Brazilian expeditionary force fought in Italy after the nation's declaration of war against the Axis in Aug. 1942.

Vargas was overthrown on Oct. 29, 1945. In elections held Dec. 2, 1945, victory went to the Vargas candidate—Gen. Eurico Gaspar Dutra, inaugurated as President on Jan. 31, 1946.

Vargas won the 1950 elections, taking office Jan. 31, 1951. He committed suicide Aug. 24, 1954, and was succeeded by João Café Filho. The latter took a leave of absence on Nov. 8, 1955, and a temporary regime took over until Jan. 31, 1956, when Juscelino Kubitschek de Oliveira of the Social Democratic party, who won the 1955 elections, was inaugurated.

**GOVERNMENT AND DEFENSE.** Under the Constitution of 1946, Brazil is a union of twenty states, five territories and one federal district. The President is popularly elected for a five-year term and may not succeed himself. The national Congress is composed of two houses—the Senate, whose members serve for eight-year terms, and the Chamber of Deputies, elected for four-year terms. Members of Congress are elected by equal, direct, compulsory and secret suffrage under a system of proportional representation.

**Defense.** Military service is compulsory beginning at twenty-one, with an initial training period of one year and service on reserve until forty-five.

The army received a considerable amount of U. S. lend-lease military goods during World War II. The air force, under a separate Ministry of Aviation since 1941, expanded during the war and took an active part in the Italian campaign.

The navy in Dec. 1955 had in active service 2 cruisers, 9 fleet destroyers, 8 frigates and escort vessels, 3 submarines and other smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.**

**Education.** Education is free and compulsory; under the 1946 Constitution it is given in Portuguese only. According to the 1950 census, 51.6% of the population 10 years of age and over could read and write. In 1952 there were 82,254 primary schools with 5,651,564 pupils, (1954) 2,485 secondary schools with 535,775 students, 795 commercial schools with 97,531 students and 598 superior schools with 64,645 students. There are 11 universities, of which 3 are private (Catholic), 7 state and one federal.

**Agriculture.** Agriculture is the basis of Brazil's economy, but only 4 per cent of its area is under cultivation, the rest being grazing, forest, or non-productive land. Brazil leads the world in production of coffee and castor beans, and ranks second in cacao. Production and export of both coffee and cacao are government-controlled. Coffee production in the 1954-55 season totaled 17,600,000 bags of 132 lb. each. Official estimates for other leading crops are as follows (in thousands of metric tons):

	1952	1953	1954*
Cacao	113.6	137.0	151.6
Rice (rough)	2,931.1	3,072.4	3,448.0
Wheat	689.5	771.7	823.8
Maize	5,906.9	5,984.3	7,071.2
Tobacco	106.3	132.1	134.3
Cotton†	515.4	374.9	447.3

\* Preliminary. † Unginned.

Other crops include sugar cane, sisal, fruit, bananas and coconuts.

**Livestock** is raised nearly everywhere, with the great centers in the central and southern states. On Dec. 31, 1953, there were 32,721,000 hogs, 16,800,000 sheep and 57,626,000 cattle.

**Manufacturing.** Manufacturing is still primarily for domestic consumption, but industrialization is progressing rapidly.

The 1950 census of industry listed 89,086 industrial establishments with 1,256,807 workers and production (1949) valued at Cr. 116,747,264,000, of which the food-processing industry accounted for 29%, textile 17%, chemical and drug 8% and metallurgical 7%. Production figures for 1955 included cement, 2,724,000 metric tons; pig iron, 1,075,000 tons; steel, 1,166,000 tons. The state of São Paulo is by far the leading industrial area.

Trade statistics for 3 years follow (in billions of cruzeiros):

	1953	1954	1955
Exports	32.05	42.97	54.52
Imports	25.15	55.15	60.23

Leading exports in 1955 were coffee (59%), cotton (9%) and cacao (6%). Leading customers in 1954 were the U. S. (37%), Germany (12%), Argentina (6%) and France (6%); leading suppliers, the

U. S. (36%), Germany (10%) and the Netherlands Antilles (6%).

Major imports include machinery, foodstuffs (largely Argentine wheat), vehicles and petroleum products.

**Communications.** The coastwise and river steamers are the main links between north and south Brazil, especially within the Amazon basin where inland waterways are the only means of land communication. Navigable waterways total 26,713 miles. Coastwise traffic is restricted to Brazilian ships, but the Amazon is open to all ships. According to *Lloyd's Register*, the merchant marine had 396 vessels (100 tons and over) aggregating 892,823 gross tons on June 30, 1955.

Railway mileage (Dec. 31, 1953) was 23,996, mostly located south of Recife. Railway development has been hampered by natural obstacles, especially by coastal mountains, but extensive government and private building is under way. Highways total 38,000 miles, and common roads about 124,000 miles. Brazil is served by numerous domestic and foreign airlines. Mileage flown by domestic lines in 1954 was 68,638,000; passengers carried total 3,119,500.

**Finance.** Recent data are as follows (in billions of cruzeiros):

	1953	1954	1955*
Revenue	37.1	46.5	53.5
Expenditure	39.9	53.7	56.5

\* Budget estimate.

**NATURAL FEATURES AND RESOURCES.** **CLIMATE.** Brazil covers about three-sevenths of South America, extends 2,800 miles north-south, 2,691 miles east-west and borders every South American state except Chile and Ecuador. Its area would cover more than blanket that of the U. S.

There are two principal physical divisions of the Brazilian surface. The lowlands are made up of the heavily forested tropical river basin of the Amazon, the world's largest drainage area; and the heavily forested basin of the Plata to the south. The intermediate highland is a vast plateau, 1,000 to 3,000 feet above sea level, traversed by several low mountain ranges and extending almost from the seacoast to the Bolivian frontier and south to the plains of Rio Grande do Sul. The Central plateau comprises more than half of the country and, with the narrow coastal plain, supports 90% of the population.

More than a third of Brazil is drained by the Amazon and its more than 1,000 tributaries. The Amazon is navigable by ocean steamers to Iquitos, Peru, 2,300 miles upstream. Southern Brazil is drained by the Plata system—the Paraguay, Uruguay and Paraná Rivers. The most important stream entirely within Brazil is the São Francisco, navigable for a thousand miles

ut broken near its mouth by the 260-foot Paulo Affonso Falls, with estimated potential of 1,000,000 horsepower.

**Mineral Resources.** Brazil's vast mineral resources are among her least developed assets. The most important are coal (estimated reserves of 5,000,000,000 tons; estimated 1955 production, 2,292,000 metric tons) and iron ore (metal content 65%), found mainly in Minas Gerais (1953 output, 3,145,000 metric tons). Other important minerals, with estimated 1953 production, are gold, 115,800 troy ounces; diamonds, 200,000 carats; bauxite, 20,200 metric tons; manganese ore, 166,100 metric tons; petroleum (1954) 990,000 barrels; tungsten; silver; quartz crystals; uranium; chrome ore; graphite and titanium.

**Forests and Fisheries.** More than half of Brazil's total area is forested, but the extensive resources are relatively undeveloped. The largest single forest commodities are timber, chiefly pine from the southern states, and the wax of the carnauba palm,

used for insulation and phonograph records and produced commercially only in Brazil (exports 1955: 12,000 metric tons). Rubber production, mostly in the Amazon basin, was estimated in 1954 at 22,300 metric tons, but it has not developed as extensively as was once expected. Other forest products are Brazil nuts, yerba maté (Paraguay tea), medicinal plants, and vegetable oils. There are vast fishing banks and grounds in the rivers and along the coast, with some 2,500 species of fish.

**Climate.** Brazil is almost wholly in the torrid zone, but such factors as altitude, prevailing winds, rainfall and distance from the sea combine to vary the climate from tropical to temperate. Manaus on the Amazon has an average temperature of 80.9° and annual rainfall of 71.65 inches. The corresponding figures for Rio de Janeiro are 72.5° and 44 inches. February is usually the warmest month in Rio de Janeiro. In much of the Amazon basin, rainfall averages 80 inches.

## BRITISH COMMONWEALTH OF NATIONS

This is a world-wide community of eight independent nations, officially termed the Commonwealth of Nations (the United Kingdom, Australia, Canada, Ceylon, India, New Zealand, Pakistan and the Union of South Africa) and their dependencies or independent territories bound together by allegiance to the British Crown or by recognition of the British sovereign as head of the Commonwealth and symbol of free and equal association of countries within its framework.

### EUROPE

#### United Kingdom of Great Britain and Northern Ireland

Area: 93,599 square miles (excluding Channel Islands and Isle of Man).

Population (est. June 1955): 50,968,000

English, Scotch, Welsh, Irish).

Density per square mile: 544.5.

Ruler: Queen Elizabeth II.

Prime Minister: Sir Anthony Eden.

Principal cities (census 1951): London (Greater), 8,346,137 (capital); Birmingham, 1,112,340 (iron and steel); Glasgow, 1,089,555 (seaport, shipbuilding); Liverpool, 789,532 (seaport); Manchester, 703,115 (textiles); Sheffield, 512,834 (steel, cutlery); Leeds, 504,954 (clothing); Edinburgh, 466,770 (capital, Scotland).

Monetary unit: Pound sterling (£).

Languages: English, Welsh, Gaelic.

Religion: Church of England (established church); Church of Wales (disestablished); Church of Scotland (established church—Presbyterian); Church of Ireland (disestablished); Roman Catholic; Methodist; Congregational; Baptist; Jewish.

**HISTORY.** Roman invasions of the 1st century B.C. brought Britain into contact with the continent. When the Roman legions withdrew in the 4th century A.D., Britain fell easy prey to the invading hordes of Angles, Saxons and Jutes from Scandinavia and the Low Countries. Seven large kingdoms were established, and the original Britons were forced into Wales and Scotland. It was not until the 11th century that the country finally became united under the Danish King Canute. Following the death of Edward the Confessor (1066), a dispute as to the succession arose, and William Duke of Normandy invaded England, defeating the Saxon noble, Harold II, at the Battle of Hastings (1066). The Norman conquest was accompanied by the introduction of Norman law and feudalism, changing the customs of England.

The reign of Henry II (1154-89), first of the Plantagenets, saw an increasing centralization of royal power at the expense of the nobles, but in 1215 John (1199-1216) was forced to sign the Magna Carta, which awarded the people, especially the nobles, certain basic rights. Edward I (1272-1307) continued the conquest of Ireland, reduced Wales to subjection, and made some gains in Scotland. In 1314, however, English forces led by Edward II were ousted from Scotland after the battle of Bannockburn. The late 13th and early 14th centuries saw the development of a separate House of Commons with tax-raising powers.

Edward III's claim to the throne of France led to the Hundred Years' War



## The Commonwealth of Nations

## Europe

## America—(cont.)

	Area (sq. mi.)	Population	Political subdivision	Area (sq. mi.)	Population
United Kingdom	96,566	50,568,000*	Jamaica and depend- encies	4,708	1,582,530
Channel Islands	76	100,000*	Leeward Islands	432	124,100
Isle of Man	221	50,000*	Trinidad and Tobago	1,980	720,000
Guernsey	2	24,500*	Windward Islands	821	304,400
Malta	103	315,500*			

## Africa

## Asia

Basutoland	11,714	565,000*	Aden colony	108	138,400
Bechuanaland	375,000	295,000*	Aden protectorate	112,000	800,000*
Camble	4,006	290,000*	Bahrein Islands	231	120,000*
Gold Coast (including Togoland)	91,848	4,620,000*	Borneo	29,388	377,300
Kenya	223,478	6,048,000*	Brunei	2,226	55,000
Mauritius and dependencies	305	300,000*	Sarawak	47,069	613,800
Nigeria (including British Cameroons)	375,030	30,780,000*	Ceylon	25,332	8,589,000*
Rhodesia and Nyassa- land Federation of			Cyprus	3,572	524,000
Northern Rhodesia	290,823	2,071,800*	Hong Kong	391	2,277,000*
Nyassaland	49,177	2,438,800*	India, Republic of	1,269,640	377,000,000*
Southern Rhodesia	150,354	2,521,000*	Malaya:		
St. Helena and dependencies	119	5,368*	Malayan Federation	50,690	6,058,800*
Seychelles	136	33,671*	Singapore and dependencies	287	1,212,500*
Sierra Leone	27,926	2,025,000*	Pakistan	364,737	80,167,000*
Somaland	67,887	64,000*			
South-West Africa	317,735	447,000*			
Swaziland	6,705	207,000*			
Tanganyika Territory	582,688	3,320,000*			
Uganda	93,881	3,500,000*			
Union of South Africa	472,733	13,915,000*			
Zanzibar and Pemba	1,020	280,000*			

## America

## Oceania

Bahamas	4,404	98,489*	Australia, Common- wealth of	2,974,581	9,201,600*
Barbados	166	225,113*	Figi	7,040	345,100*
Bermudas	21	4,180*	Gilbert and Ellice Islands	369	38,600*
British Guiana	22,997	492,900*	Nauru	8	3,400*
British Honduras	8,867	70,000*	New Hebrides	5,700	52,100*
Canada	3,619,616	15,818,000*	New Zealand	103,740	2,172,800*
Falkland Islands (excluding dependencies)	4,618	2,220*	Norfolk Island	13	1,100*
			Papua-		
			New Guinea	183,590	1,701,400*
			Solomon Islands	11,500	103,000*
			Tonga (Friendly Islands)	270	56,000*
			Western Samoa	1,131	91,000*

(Note: Each population figure is followed by superscript number denoting the year of estimate or census: \* for 1946, † for 1938, ‡ for 1934, § for 1933, ¶ for 1931.)

(1338-1453), which ended with the loss of almost all the large English territory in France. In England the great poverty and discontent caused by the war was intensified by the Black Death, a plague which reduced the population by about one-third. The Wars of the Roses (1455-85), a struggle for the throne between the House of York and the House of Lancaster, were ended by the victory of Henry Tudor (Henry VII) at Bosworth Field (1485).

During the reign of Henry VIII (1509-47), the Church in England asserted its

independence from the Roman Catholic Church Under Edward VI and Mary, the two extremes of religious fanaticism were reached and it remained for Henry's daughter, Elizabeth I (1558-1603), to set the Church of England on a moderate basis. In 1588 the Spanish Armada, a fleet sent out by Catholic King Philip II of Spain, was defeated by the English and destroyed during a storm. It was during Elizabeth's reign that England became a world power.

Elizabeth's heir was of the house of

Stuart—James VI of Scotland—who joined the two crowns as James I (1603-25). The Stuart Kings incurred large debts and were forced either to depend on Parliament for taxes or to raise money by illegal means. In 1642 war broke out between Charles I and a large portion of the Parliament; Charles was defeated and executed in 1649, and the monarchy was then abolished. The Puritan Commonwealth endured for ten years, but after the death (1658) of Oliver Cromwell, the Lord Protector, the government fell to pieces and Charles II was restored to the throne in 1660. The struggle between the King and Parliament continued, but Charles II knew when to compromise. His brother James II (1685-88) possessed none of his ability and was ousted by the Revolution of 1688, which confirmed the predominant position of Parliament. James' daughter, Mary, and her husband, William of Orange, now ruled jointly.

The reign of Queen Anne (1702-14) was marked by the Duke of Marlborough's victories over France at Blenheim, Oudenarde and Malplaquet in the War of the Spanish Succession. England and Scotland meanwhile were joined together by the Act of Union (1707). Upon the death of Anne, the distant claims of the elector of Hanover were recognized, and he became King of England as George I.

The 18th century was a period of gradual growth and change. At home the unwillingness of the Hanoverian Kings to rule resulted in the formation by the King's ministers of a Cabinet, headed by a Prime Minister, which directed all public business. Abroad the constant wars with France resulted in expansion of the British Empire all over the globe, particularly in North America and India. This imperial growth was checked by the revolt of the American colonies (1775-81).

The age-long struggle with France broke out again in 1793, and during the lengthy Napoleonic Wars, which ended at Waterloo (1815), England was pitted at one time against almost all of Europe.

The Victorian era, named after Queen Victoria (1837-1901), saw the growth of a democratic system of government which had begun with the Reform Bill of 1832. The two important wars in Victoria's reign were the Crimean War against Russia (1853-56) and the Boer War (1899-1902). The latter was accompanied by enormous extension of England's sway in Africa.

The reign of Edward VII (1901-10) was marked by increasing uneasiness at home and abroad. Within four years after the accession of George V (1910), England entered World War I when Germany invaded Belgium. The nation was led by coalition Cabinets headed first by Herbert Asquith and then (Dec. 1916) by the Welsh states-

man, David Lloyd George. The years after the war were marked by labor unrest which culminated in the general strike of 1926. A Labour ministry formed early in 1924 by Ramsay MacDonald fell in October of that year. In 1929 a second Labour government was formed, but the world economic depression forced a change in 1931, and a national government was formed composed chiefly of Conservative members, although MacDonald remained Prime Minister until 1935. King Edward VIII succeeded to the throne in 1936 on his father's death but abdicated eleven months later (in order to marry an American, Wallis Warfield Simpson, whose second divorce was then pending) in favor of his brother, who became King George VI.

The efforts of Prime Minister Neville Chamberlain to meet by peaceful means the rising tide of Nazism in Germany failed with the German invasion of Poland (Sept. 1, 1939), which was followed by England's entry into World War II (Sept. 3, 1939). Serious Allied reverses in the spring of 1940 led to Chamberlain's resignation and the formation of another coalition war Cabinet by Conservative leader Winston Churchill, who led England through most of World War II. Churchill resigned as the coalition leader shortly after V-E Day, but then formed a "caretaker" government which remained in office until after the parliamentary elections of July 5, 1945, in which the Labour party won an overwhelming victory. The government formed by Clement R. Attlee on July 26 began a moderate socialistic program.

Internationally, the Attlee government continued Britain's close co-operation with the United States through the North Atlantic Treaty and in the Korean war, at the same time solidifying its position in Western Europe in opposition to the U.S.S.R. The Labour regime, returned to office by a slight majority in the parliamentary elections of Feb. 1950, lost by a narrow margin in the Oct. 1951 elections. On Oct. 26 Winston Churchill again became Prime Minister at the head of a Conservative government. George VI died Feb. 6, 1952, and was succeeded by his daughter, Elizabeth II.

Churchill voluntarily stepped down on April 5, 1955, in favor of Sir Anthony Eden, who led the Conservatives to another victory in elections May 26, 1955.

#### AREA AND POPULATION OF MAJOR SUBDIVISIONS\*

Subdivision	Area sq. mi.	Population, est. June 1955
England	50,871	44,441,000
Wales	7,474	
Scotland	29,795	5,133,000
Northern Ireland	5,459	1,394,000

\* Not including Channel Islands and Isle of Man.

**RULER.** Queen Elizabeth II, born April 21, 1926, elder daughter of King George VI and Queen Elizabeth, succeeded to the throne on the death of her father, Feb. 6, 1952; married Nov. 20, 1947, to Prince Philip, Duke of Edinburgh, born June 10, 1921; their children are Prince Charles (heir presumptive), born Nov. 14, 1948, and Princess Anne, born Aug. 15, 1950. The Queen's sister is Princess Margaret Rose, born Aug. 21, 1930; her uncles are Prince Edward Albert, Duke of Windsor (formerly King Edward VIII), born June 23, 1894, and Prince Henry William, Duke of Gloucester, born March 31, 1900.

**GOVERNMENT & DEFENSE.** The United Kingdom is a constitutional monarchy, with a Queen and a Parliament which has two houses: the House of Lords with about 805 hereditary peers, 26 spiritual peers, 16 Scottish representative peers, a number of Irish representative peers (vacancies are no longer filled), and a few life peers who hold or have held high judicial office; and the House of Commons, numbering since 1955 630 members elected by practically universal suffrage. Supreme legislative power is vested in Parliament, which holds office for five years unless sooner dissolved. The executive power of the Crown is exercised by the Cabinet, headed by the Prime Minister. The latter, normally the head of the party commanding a majority in the House of Commons, is appointed by the sovereign, with whose consent he in turn appoints the rest of the Cabinet. All ministers must be members of one or the other house of Parliament; they are individually and collectively responsible to the Crown, the Prime Minister and Parliament. The Cabinet proposes bills and arranges the business of Parliament but it depends entirely on the votes of confidence in Commons. The lords cannot hold up "money" bills, but they can delay other bills for a period of at least one year.

By the Act of Union (1707) the Scottish Parliament was assimilated with that of England, and Scotland is now represented in Commons by 71 members. The Secretary of State for Scotland, a member of the Cabinet, is responsible for the administration of Scottish affairs.

Parliamentary elections held on May 26, 1955, returned 345 Conservatives and associates, 277 Labour party, 6 Liberals and 2 Irish nationalists. Polling at contested elections was: Conservatives and associates, 13,336,182; Labour, 12,405,130; others, 295,772 (including Communist, 33,144).

The members of the Cabinet (June 1956): Sir Anthony Eden (Prime Minister, First Lord of the Treasury), Selwyn Lloyd (Secretary of State for Foreign Affairs), Marquess of Salisbury (Lord President of the Council), Viscount Kilmuir (Lord Chancellor), Earl of Selkirk (Chancellor

of the Duchy of Lancaster), Richard A. Butler (Lord Privy Seal), Sir Walter Monckton (Minister of Defence), Earl of Home (Secretary of State for Commonwealth Relations), James Stuart (Secretary of State for Scotland), A. T. Lennox-Boyd (Secretary of State for the Colonies), Gwilym Lloyd-George (Secretary of State for the Home Department and Welsh Affairs), Harold Macmillan (Chancellor of the Exchequer), Iain MacLeod (Minister of Labour and National Service), Duncan Sandys (Minister of Housing and Local Government), Peter Thorneycroft (President of the Board of Trade), Dr. Heathcoat Amory (Minister of Agriculture, Fisheries and Food), Patrick Buchan-Henry (Minister of Works), Sir David Eccles (Minister of Education).

**Local Government.** Both England and Wales are divided into 62 administrative counties including the county of London, and 83 county boroughs. The counties are administered by the justices and by popularly elected county councils. All incorporated towns are administered by a municipal corporation consisting of the mayor, aldermen and burgesses. Local government in Scotland is comparable to that in England and Wales.

**Judiciary.** The ultimate British court of appeal is the House of Lords; the final court of appeal for certain of the Dominions is the Judicial Committee of the Privy Council. Below the House of Lords on the civil side is the High Court of Judicature, divided into two parts, the Court of Appeal, and the High Court of Justice. On the criminal side is the Court of Criminal Appeal, which is the court of last resort barring the rare allowance of an appeal to the Lords. Actually these superior courts hear only a small fraction of the cases, and most of the trials are held in a complicated system of inferior courts exercising original jurisdiction. The Lord Chancellor, Lord Chief Justice, Lords of Appeal in Ordinary (law members of the House of Lords), and Lord Justices of Appeal are appointed by the Prime Minister.

**Defense.** Compulsory military service, introduced in May 1939, is still in effect, and will continue until 1959 under the terms of National Service acts since passed. An act passed in 1950 makes 2 years' national service compulsory for men between 18 and 26. The armed forces are comprised of three separate services—the Army, the Royal Navy and the Royal Air Force. The Prime Minister retains responsibility for defense, but the Minister of Defense has coordinating and executive duties.

Service ministers are no longer Cabinet members but continue to be members of the Defense Committee headed by the Prime Minister with the Minister of Defense as deputy chairman; this committee



is responsible to the Cabinet both for the review of current strategy and for coordinating departmental action in preparation for war.

Military-budget estimates for the fiscal years 1955-56 and 1956-57 follow:

	1955-56	1956-57
Navy	£347,000,000	£351,000,000
Army	£484,000,000	£479,000,000
Air	£540,400,000	£517,500,000

The estimated strength of the armed forces at April 1, 1956, was 772,000, including 465,500 regulars, 289,100 national servicemen and 17,400 women; the projected strength at April 1, 1957, was 735,000.

Control of the land forces is exercised by the Army Council, headed by the Secretary of State for War. Its members include the Chief of the Imperial General Staff, the Adjutant General and Quartermaster General.

The Royal Navy is controlled by the Board of Admiralty, headed by the First Lord of the Admiralty, who is responsible to Parliament. Other members include the First Sea Lord and Chief of Naval Staff. In Dec. 1955, the Royal Navy had in active service and in reserve 5 fleet carriers, 9 light aircraft carriers, 2 escort carriers, 5 battleships, 24 cruisers, 80 destroyers, 59 submarines, 2 coast defense ships, 183 frigates and destroyer escorts and many other smaller craft. Several aircraft carriers, cruisers and smaller craft were under construction.

Control of the Royal Air Force is vested in an Air Council analogous to the Army Council and headed by the Secretary of State for Air. The Fleet Air Arm was transferred to the Royal Navy in 1937.

A total of 5,896,000 men served in the armed forces during World War II; there were also 640,000 in the Women's Auxiliary Forces. Units of the navy, army and air force served in Korea.

Research and development in the field of atomic energy and weapons is the responsibility of the Atomic Energy Authority.

#### SOCIAL AND ECONOMIC CONDITIONS.

**Education.** The school system in England and Wales has undergone considerable change since enactment of the Education Act of 1944. This measure makes primary and secondary training available for all children at public expense, with the secondary stage starting at the age of 11. The school-leaving age was raised from 14 to 15 on April 1, 1947. Statistics are:

England and Wales (Jan. 1954): 23,501 primary schools and 4,976 secondary schools with total enrollment of 6,375,815; special schools, 712, pupils 56,394. Scotland (1953-54): 2,862 primary schools, pupils 590,577; 817 secondary schools, pupils 232,845.

In 1954-55 the 13 English universities had 63,636 students; the 4 university colleges (1953-54) 2,729 students, the University of Wales 4,290 and the 4 Scottish universities 14,945.

**Agriculture.** Agriculture remains one of Britain's chief industries, employing about 800,000 persons.

#### LEADING AGRICULTURAL PRODUCTS

(in thousands)

	1954		1955*	
	Acres	Long tons	Acres	Long tons
Wheat	2,457	2,783	1,948	2,599
Barley	2,063	2,244	2,296	2,936
Oats	2,588	2,440	2,581	2,709
Sugar beets	437	4,521	424	4,524
Potatoes	945	7,325	874	6,278

\* Provisional.

Livestock (June 30, 1955) included 10,-670,000 cattle, 22,957,000 sheep, 5,854,000 hogs and 86,824,000 poultry. Cattle occupy a predominant position in British agriculture, accounting for about 40 per cent of the total farm output. Production of cheese (1954-55, including farmhouse) was 68,000 long tons; butter (including farmhouse), 27,000 tons; beef and veal, 777,100 tons; mutton and lamb, 186,200 tons; bacon and ham, 370,500 tons; wool (fleece), 33,000 tons.

**Industry.** The most important British manufacture is heavy goods such as machinery, tools, bridges and locomotives; industry is concentrated in the north and Midlands of England. Sheffield is the center of the steel industry, while the china industry is concentrated in the Midlands. The cotton industry is centered in Lancashire; Liverpool, Manchester, Oldham, Preston and Bolton are the main manufacturing towns. The wool industry, England's oldest large trade, is located just east of the cotton towns, at Leeds, Bradford and Hull in Yorkshire. An important industrial region is the central Lowlands of Scotland, where woolens, silks, linens, cottons, lace, glass, paper, steel and pig iron are produced. Important shipyards are located along the coast. Vessels aggregating 1,400,000 gross tons were completed in 1954; they represented about 27% of the world total. On Mar. 31, 1955, 335 vessels of 2,144,146 gross tons were under construction in the United Kingdom. Steel production in 1955 was 19,812,000 long tons; that of pig iron, 12,480,000 tons. The iron and steel industry passed into public ownership in 1951 but was denationalized in 1953. In 1955, 897,570 cars and 339,500 trucks and other commercial vehicles were produced.

In April, 1948, there were 51,050 industrial establishments having more than 10 employees; the total working population on Dec. 31, 1955, was 24,018,000.

**Trade.** The United Kingdom's economic prosperity is dependent on its foreign trade, and the nation made great efforts after World War II to build up its volume of exports.

### OVERSEAS TRADE

(Value in millions of pounds sterling)

	Imports	Exports	Re-exports
1952	3,477.0	2,584.2	143.9
1953	3,343.4	2,582.1	105.5
1954	3,373.9	2,674.2	100.7
1955*	3,886.1	2,905.5	118.7
1956†	985.6	775.3	41.0

\* Provisional. † First three months.

### LEADING EXPORTS AND IMPORTS

(in millions of pounds sterling)

Exports		
	1954	1955*
Machinery (nonelectrical)	409.4	460.0
Vehicles and aircraft	307.5	337.5
Chemicals	204.5	232.8
Electrical machinery	170.2	191.9
Manufactures of metals	146.4	165.4

Imports		
	1954	1955*
Meat	255.8	292.6
Nonferrous base metals	174.3	231.2
Cereals and cereal preparations	175.7	222.3
Fruits and vegetables	203.1	222.1
Wood and cork	155.2	192.8

\* Provisional.

### DISTRIBUTION OF TRADE, 1953-55

(millions of pounds sterling; 1955, provisional)

#### Chief Destinations of Exports

	1953	1954	1955
Australia	212.9	277.6	284.3
United States	158.8	149.4	183.1
South Africa	157.9	156.1	166.7
Canada	156.8	131.9	140.8
New Zealand	100.3	125.9	139.3
India	114.5	114.8	129.8

#### Chief Sources of Imports

	1953	1954	1955
United States	252.7	282.4	421.0
Canada	305.5	272.8	343.6
Australia	294.2	235.9	265.0
New Zealand	169.8	176.0	180.7
India	113.4	148.4	158.9
Sweden	116.1	116.9	140.3

**Communications.** The merchant marine on June 30, 1955, totaled 5,632 ships (100 tons and over) with a gross tonnage of 19,356,660—about 19% of the world total and second only to the U. S. merchant fleet. Losses during World War II totaled 2,426 vessels of 11,331,933 gross tons.

Nationalization of the railway and canal systems in Great Britain became effective

Jan. 1, 1948, and they are now operated by the government's Transport Commission. Railway mileage in the United Kingdom (1950) was 20,469; in 1955, 966,900,000 passengers and 273,900,000 long tons of freight were carried in Great Britain. The total length of public highways is 183,477 miles, of which 157,089 are in England and Wales and 26,388 in Scotland. In Nov. 1955, licensed motor vehicles totaled 6,260,000, including 3,420,000 cars and 1,036,000 commercial trucks. Radio receiving licenses in Mar. 1956 numbered 8,522,000; television and radio sets 5,740,000.

British air services throughout the world are nationalized under the Minister of Civil Aviation. Service is supplied by two public corporations—British Overseas Airways (BOAC) and British European Airways. In 1954, they flew 58,044,000 air miles and carried 2,437,200 passengers.

**Finance.** Recent data are as follows (in millions of pounds sterling):

	1954-55	1955-56	1956-57*
Revenue	4,737.9	4,893.1	5,197.5
Expenditure	4,304.7	4,496.0	4,737.7

\* Budget estimate.

The net debtweight debt on Mar. 31, 1956, was £27,040,000,000; 1955, £26,933,000,000; 1950, £25,986,000,000; Sept. 1939, £8,400,000,000.

### ESTIMATED REVENUE AND EXPENDITURE 1956-57

Estimated Revenue	
Income tax	£2,085,500,000
Surtax	144,000,000
Death duties	170,000,000
Stamps	58,900,000
Profits tax and excess profits tax	216,750,000
Excess profits levy	4,000,000
Other inland revenue duties	1,000,000
Total inland revenue	£2,680,150,000
Customs	1,204,000,000
Excise	953,350,000
Total customs and excise	£2,157,350,000
Motor vehicle duties	£92,000,000
Total receipts from taxes	£4,929,500,000
Post office (net receipts)	£10,000,000
Broadcast receiving licenses	£28,000,000
Receipts from sundry loans	£30,000,000
Miscellaneous	£200,000,000
Total estimated revenue	£5,197,500,000

#### Estimated Expenditure

Consolidated fund:	
National debt service	£670,000,000
Sinking funds	37,000,000

Payments to		
Northern Ireland		
Exchequer	61,000,000	
Other consolidated		
fund services	10,000,000	
Total consolidated fund	£778,000,000	
Supply services: Defense:		
Army	479,000,000	
Navy	351,000,000	
Air	517,500,000	
Ministry of		
Supply	185,000,000	
Ministry of		
Defense	16,200,000	
Total	£1,548,700,000	
Less sterling counterpart		
of economic aid appropri-		
ated-in-aid of defense		
votes	£50,000,000	
	£1,498,700,000	
Civil service:		
Central government		
and finance	20,850,000	
Commonwealth		
and foreign	90,469,000	
Home department,		
law and justice	89,214,000	
Education and		
broadcasting	413,571,000	
Health, housing, local		
government	728,732,000	
Trade, labor		
and supply	72,507,000	
Works, station-		
ery, etc.	74,392,000	
Agriculture and		
food	324,078,000	
Transport, fuel,		
power and in-		
dustrial re-		
search	158,649,000	
Pensions, national		
insurance,		
national assist-		
ance	455,753,000	
Total civil service	£2,428,215,000	
Tax collection		
	£52,770,000	
Total supply services		
	£3,979,685,000	
Less—net reduc-		
tion in supply		
expenditure	20,000,000	
Total estimated		
expenditure	£4,737,685,000	
Surplus		
	459,815,000	
Grand total		
	£5,197,500,000	

**NATURAL FEATURES AND RESOURCES;**  
**CLIMATE.** The United Kingdom, consisting of England, Wales, Scotland and Northern Ireland, is a third the size of Texas. England, in the southeast part of the British Isles, is separated from Scotland on the north by the granite Cheviot Hills; from them the Pennine chain of uplands extends south through the center of England, reach-

ing its highest point in the Lake district in the northwest. To the west along the border of Wales—a land of steep hills and valleys—are the Cambrian Mountains while the Cotswolds, a range of hills in Gloucestershire, extend into the surrounding shires. The remainder of England is plain land, though not necessarily flat, with the rocky sand-topped moors in the southwest, the rolling downs in the south and southeast and the reclaimed marshes of the low-lying Fens in the east central districts. Scotland is divided into three physical regions—the Highlands, the Central Lowlands, containing two-thirds of the population, and the Southern Uplands. The western Highland coast is intersected throughout by long narrow sea-lochs or fiords. Scotland also includes the Outer and Inner Hebrides and other islands off the west coast, and the Orkney and Shetland Islands off the north coast.

Wales is generally hilly; the Snowdon range in the northern part culminates in Mt. Snowdon (3,557 ft.), highest in either England or Wales.

In addition to the numerous inlets and bays of the coast, England has a group of lakes in the northwest which includes Windermere, Coniston, Derwentwater, Ullswater and Grasmere. Important rivers flowing into the North Sea are the Thames, Humber, Tees and Tyne. In the west are the Severn and the Wye, which empty into the Bristol Channel and are navigable, as are the Mersey and Ribble. Scotland has many picturesque lakes; its most important river is the Clyde.

**Minerals.** Great Britain's most important mineral resource is coal, which was responsible to a large extent for British industrial supremacy during the late 18th and the 19th centuries. The coal mines were nationalized in 1946. Reserves have been variously estimated at from 150,000 million to 200,000 million tons. Prior to World War II, coal was exported in declining amounts to the continent, mainly to France, Sweden, Denmark and Italy. Since the war, however, exports have been negligible, and Britain has been hard put to meet her own minimum domestic requirements.

Most of the British iron ore is produced in England, especially in Cumberland, Lancashire and Staffordshire. Tin ore and copper are obtained almost exclusively from Cornwall, while lead comes mainly from Flint, Durham and Derbyshire. Zinc occurs mainly in North Wales, the north of England, the Isle of Man and the county of Dumfries in Scotland. The whole British supply of china clay (kaolin)—of great importance in the ceramic, papermaking, bleaching and chemical industries—comes from Cornwall. Petroleum production is negligible, but oil shale exists in large quantities.



## MINERAL PRODUCTION, 1954 and 1955

(in thousands of long tons)

	1954	1955
Coal *	224,090	221,600
Iron ore	15,557†	16,175†
Aluminum	116	120
Superphosphates (P <sub>2</sub> O <sub>5</sub> content)	170	168
Zinc (smelter)	81	81

\* Excluding No. Ireland. † 52 weeks.

**Water Power.** The most important potential sources of water power are in the highlands of Scotland, North Wales and Cumberland. Electricity generated in England, Scotland and Wales averaged 6,679,000,000 kwh. monthly in 1955. Gas manufacture averaged 1,418,000,000 cu. m. monthly in that year. Nationalization of the electric and gas industries became effective in 1948.

**Forests and Fisheries.** Great Britain was once heavily forested, but centuries of timber cutting and clearing have denuded the country of the original forests. Woodland of all types approximates 3,000,000 acres, and barely 40 per cent of Britain's surface is covered with timber. Consequently the nation is heavily dependent on imported timber.

Great Britain's sea fishing industry is among the most important in the world. The principal kinds of fish caught are herring, cod, haddock, plaice and hake, classed as wet fish, and, among shellfish, oysters, crabs and lobsters. The most important factor in the export trade is salted herring, which ordinarily represents about 70 per cent of the total. The principal grounds frequented by British fishermen are the North Sea; off Iceland; the Faeroes; south of Ireland; west of Scotland; west of Ireland; the Irish Sea and English Channel. The catch of wet fish in 1955 was 959,850 long tons valued at £44,698,821.

**Climate.** Although Great Britain lies in the same approximate latitude as Labrador, its climate is tempered by the westerly winds blowing off the warm Gulf Stream. The sea winds also prevent excessive summer heat. Rainfall is abundant, especially in the early fall. London's famed "pea-soup" fogs occur most frequently in November and March. It has been estimated that clouds, fogs or mists obscure the sun for approximately two-thirds of the daylight hours.

The mean annual temperature of England and Wales is about 50°; the west coast is somewhat warmer than the east. January is the coldest month (average about 40°) and July the hottest (about 61.5°). Highest July temperatures usually occur around London, where the mean is somewhat above 64°. Coldest months in the capital are December (about 38°) and January (about 39°). The mean annual rainfall in London is 23½ inches.

North of Birmingham, the summers are cool, and in Edinburgh the mean temperature in July is usually below 60°. Rainfall is less than in London.

## NORTHERN IRELAND

(Part of United Kingdom)

Area: 5,459 square miles.

Population (est. June 1955): 1,394,000.

Density per square mile: 255.4.

Governor: Lord Wakehurst.

Prime Minister: Viscount Brookeborough.

Principal cities (census 1951): Belfast, 443,671 (capital); Londonderry, 50,092 (clothing).

Monetary unit: Pound sterling.

Language: English, Gaelic.

Religions (census 1951): Roman Catholic (34.4%), Presbyterian (29.9%), Church of Ireland (25.8%), Methodist (4.9%), others (5%).

Northern Ireland comprises the six predominantly Protestant counties of Antrim, Armagh, Down, Fermanagh, Londonderry and Tyrone (collectively known as Ulster) which form the northern part of the island of Ireland. The area is an integral part of the United Kingdom, but under the terms of the Government of Ireland Act (1920) it has a semi-autonomous government.

The government has only limited powers for local purposes, and many matters are reserved to the central government at Westminster. Executive authority is vested in the Crown-appointed Governor, who is advised by a Cabinet of eight ministers headed by the Prime Minister. The Parliament consists of the House of Commons of 52 members elected for 5-year terms and the Senate of 26 members elected by the House of Commons. The general elections of Oct. 22, 1953, returned 38 Unionists, 9 Nationalists and 5 representatives of other groups to the House. The area is also represented by 12 members in the British Parliament at London.

In 1953-54 there were 1,642 primary schools (up to 11 years) in Northern Ireland, with enrollment of 202,971, and 81 secondary schools, with enrollment of 30,332. Students at the Queen's University (Belfast) numbered 2,144.

Agriculture is the largest single industry; about two-thirds of the country is devoted to crops and pasture under a system of mixed farming. The leading crops include potatoes, oats and flax. In 1955 there were 957,400 cattle, 956,000 sheep and 812,700 hogs.

The two principal manufacturing industries are linen and shipbuilding, both centered in Belfast. The linen industry was established by Huguenot weavers who fled France after the revocation of the Edict of Nantes in 1685.

On Sept. 30, 1955, 21 ships of 240,140 tons were under construction at Belfast.

The topography of Northern Ireland is somewhat similar to that of the rest of the island, with two ranges (Donegal and Sperrin) and an extensive plateau (Antrim) in the northeastern part. Mineral resources are limited to deposits of basalt, clay, sandstone and granite. Fishing is an important industry, off the coast and in the numerous lakes and rivers which abound in salmon, eels and trout. Lough Neagh, covering about 153 square miles, is the largest lake in the British Isles.

The climate is comparable to that of the rest of the United Kingdom, although somewhat more equable. The highest mean summer temperature is about 59° in July, and the mean winter temperature rarely falls below 40°. Most of the comparatively light rainfall occurs in the autumn.

### ISLE OF MAN

Lieutenant Governor: Sir Ambrose Dundas.

Located in the Irish Sea, equidistant from Scotland, Ireland and England, the Isle of Man is administered according to its own laws by a government composed of the Lieutenant Governor (appointed by the Crown), a Legislative Council of 11 members, and a House of Keys of 24 elected members, one of the most ancient legislative assemblies in the world. All sitting together constitute the court of Tynwald, which controls revenue and has executive power. Acts of the British Parliament do not affect the island unless it is named.

Agriculture and fishing are the principal industries. The island is a popular English summer resort.

### CHANNEL ISLANDS

Lieutenant Governor of Jersey: Adm. Sir Randolph Nicholson.

Lieutenant Governor of Guernsey: Air Marshal Sir Thomas Elmhirst.

This group of islands, lying in the English Channel off the northwest coast of France, is the only portion of the Duchy of Normandy belonging to the English Crown, to which it has been attached since the conquest of 1066. It was the only British possession occupied by Germany during World War II.

For purposes of government the islands are divided into Jersey (45 sq. mi.) and the bailiwick of Guernsey (24 sq. mi.), including Alderney (3 sq. mi.), Sark (2 sq. mi.), Herm and Jethou. The islands are administered according to their own laws and customs by local governments headed by Crown-appointed Lieutenant Governors. Acts of Parliament in London are not binding on the islands unless they are specifically mentioned.

The two main sources of income for the population are agriculture, especially stock-raising, and the tourist trade. French is still the official language, although English is the main language of commerce.

**GIBRALTAR—Status:** Colony.

Governor: Lt. Gen. Sir Harold Redman.

Gibraltar, at the south end of the Iberian Peninsula, is a rocky promontory commanding the western entrance to the Mediterranean. Aside from its strategic importance, it is also a free port, naval base and coaling station. It was captured by the Arabs crossing from Africa into Spain in A.D. 711. In the 15th century it passed to the Moorish ruler of Granada and later became Spanish. It was captured by an Anglo-Dutch force in 1704 during the War of the Spanish Succession and passed to Britain by the Treaty of Utrecht in 1713. Most of the inhabitants are of Spanish, Italian and Maltese descent. There are no important industries. Gibraltar's climate is equable, with summer temperatures averaging about 84° maximum. Mean annual temperature is 64.4° and annual rainfall is about 35 inches.

**MALTA—Status:** Self-governing colony.

Capital: Valletta (population 18,801).

Governor: Maj. Gen. Sir Robert Laycock.

Prime Minister: Dominic Mintoff.

Foreign trade (1955): exports, £850,625 (52% to Britain); re-exports, £1,882,296 (largely fuel for ships and aircraft); imports, £21,187,115 (39% from Britain). Chief domestic export: potatoes (22%).

Agricultural products: potatoes, onions, cereals, fruits.

The Maltese islands lie between Europe and Africa, in the central channel linking the eastern and western Mediterranean. The inhabited islands are Malta (95 sq. mi.), Gozo (26 sq. mi.) and Comino (1 sq. mi.). The Knights of St. John (Malta), who obtained the islands from Charles V in 1530, reached their highest fame when they withstood an attack by superior Turkish forces in 1565. Napoleon seized Malta in 1798, but the French forces were ousted by British troops in 1799, and British rule was confirmed by the Treaty of Paris (1814). The principal importance of Malta is its strategic location as a naval base; it was heavily attacked by German and Italian aircraft during World War II but was never invaded by the Axis. Most of the population are Maltese, speaking the Phoenician Maltese language, a tongue akin to Syriac and Arabic. The islands are densely populated (2,554 per square mile in 1956).

Under its 1947 Constitution, Malta enjoys a measure of self-government. The locally-elected Assembly has complete control over domestic affairs, but the British government keeps control over matters dealing with defense and foreign affairs.

The climate is temperate and healthful. Annual mean temperature is 64.5°, with June-September the hottest months and December-February the coldest (56°). Rainfall is irregular, averaging about 20 inches annually.

## AFRICA

### BRITISH SOUTH AFRICAN TERRITORIES

High Commissioner: Sir Percivale Liebschig.

The three British protectorates in southern Africa—Basutoland, Bechuanaland and Swaziland—are not part of the Union of South Africa, but are administered by a High Commissioner responsible to the Secretary of State for Commonwealth Relations in the British Cabinet. He also holds the office of High Commissioner for the United Kingdom in the Union of South Africa.

**BASUTOLAND**—Status: Protectorate.

Capital: Maseru (population 3,383).

Resident Commissioner: E. P. Arrow-smith.

Foreign trade (1954): exports, £1,954,105; imports, £2,612,007. Chief exports: wool, mohair.

Agricultural products: corn, wheat, sorghum.

Basutoland is a mountainous enclave surrounded by the Union of South Africa and bounded by the Orange Free State, Cape Province and Natal. It was constituted a native state under British protection by a treaty signed with the native chief Moshesh in 1843. It was annexed to Cape Colony in 1871, but on Mar. 13, 1884, was restored to direct control by the Crown. The Resident Commissioner is advised by a council of 100, of whom 95 are nominated by the native chiefs who administer the affairs of their tribes.

The population is restricted almost entirely to the lowland strip in the west; the white population (1,676 by the last census, in 1946) consists solely of officials, missionaries, traders and a few labor agents for employers in the Union of South Africa. About 100,000 natives are regularly employed in the Union. Sheep raising is highly developed. Land is the common property of the nation and is held in trust by the chiefs. There are no European farmers.

The climate is dry and variable; temperatures range from 11° to 93°. Rainfall also is variable, but it is heaviest during the summer months; it averages about 30 inches annually.

**BECHUANALAND**—Status: Protectorate.

Capital: Mafeking, in Cape Province (population 4,666).

Resident Commissioner: M. O. Wray.

Foreign trade (1954): exports, £2,423,683; imports, £2,053,423. Chief export: pastoral products.

Agricultural products: hides and skins, cattle, butter, millet, maize.

Minerals: gold and silver.

Bechuanaland lies in south central Africa, bounded on the south and southeast by the Union of South Africa, on the west by South-West Africa, on the north by Angola and Northern Rhodesia and on the northeast by Southern Rhodesia. Its average elevation is 3,300 feet and the greater part is gently undulating. The area was placed under British protection on Sept. 30, 1885, to prevent further Boer encroachment and has since remained a British protectorate. The form of government is similar to that of Basutoland.

Most of the inhabitants are Bantu, but there were 2,325 Europeans in 1946, a few of them farmers. The country is essentially pastoral, with cattle raising and dairy farming the chief industries. Gold is mined in the Tati district near Francistown. There is also some mining of silver and copper. Timber is produced for use as fuel and pit props.

The summers are intensely hot; winters (May-August) are pleasant. Rainfall occurs mostly between December and May and averages about 18 inches annually.

**SWAZILAND**—Status: Protectorate.

Capital: Mbabane (population 1,600).

Resident Commissioner: D. L. Morgan.

Foreign trade (1954): exports, £3,134,462; imports, £2,386,332. Chief exports: cattle, asbestos.

Agricultural products: cattle, hides and skins, butter, tobacco, corn, millet.

Minerals: asbestos, tin, gold.

Swaziland lies at the southeastern corner of the Transvaal. It is largely hilly, with an average elevation of 4,000 feet to the west. It came under the protection of the Transvaal Republic in 1894 but was made a British protectorate in 1906 under the High Commissioner for South Africa.

The natives are mostly Swazi; there were 3,204 Europeans in 1946, mostly farmers. Grazing is the principal native occupation; there is excellent pasture in the high land to the west. Tropical and subtropical crops are raised in the lower areas. Tin is mined near Mbabane.

Rainfall is moderate throughout the protectorate (about 20 inches a year) and is heaviest in summer. Average temperature ranges from about 65° in July to 80° or more in January.

### EAST AFRICA HIGH COMMISSION

The East Africa High Commission, comprising the Governors of Kenya, Tanganyika and Uganda, administers the public utilities and other central services of the territories, and has power to legislate with



respect thereto with the advice and consent of a Central Legislative Assembly. The governments of the three areas are otherwise independent of one another.

#### KENYA—Status: Colony and protectorate.

Capital: Nairobi (pop. 1948: 119,489).

Governor: Sir Evelyn Baring.

Foreign trade (1955)\*: domestic exports, £25,666,650 (32% to Britain); re-exports, £2,350,039; imports, £71,523,190 (44% from Britain). Chief exports: coffee (35%), tea (11%), wattle bark extract (9%).

Agricultural products (exports 1955): coffee, 19,382 long tons; tea, 5,779 tons; sisal, pyrethrum, sugar cane.

Minerals: gold (exports 1955: 12,322 oz.), sodium carbonate, silver, salt.

Forest products: wattle bark extract (exports 1955: 33,223 long tons), timber.

\* Import and re-export figures exclude outward transfers of imported goods to Tanganyika and Uganda.

Kenya extends along the Indian Ocean between Ethiopia and Tanganyika Territory and westward to Lake Victoria and Uganda. Formerly known as the East Africa Protectorate, it was held under a concession from the Sultan of Zanzibar by the Imperial British East Africa Company from 1888 to 1905. It became a Crown colony in 1920, the coastal strip leased from the Sultan becoming a protectorate.

The colony is predominantly agricultural, and a large area is cultivated by Europeans. Altitude ranges from sea level to more than 9,000 ft.; hence, the cultivation of tropical, subtropical and temperate crops is possible. Non-natives (1955) included 52,400 Europeans, 144,100 Indians and Goans and 31,600 Arabs.

Kenya has been plagued since 1952 by serious outbreaks of native terrorism inspired by the anti-white Mau Mau secret society, which have taxed strengthened security forces, including British regular army units.

The coastal zone of Kenya is hot and humid; February to April are the hottest months, with a mean temperature of 82° at Mombasa. June and July are coolest (76° at Mombasa). The yearly average rainfall is about 48 inches. In the interior highlands the climate is temperate, and the rainfall comparatively heavy. Yearly average temperatures at Nairobi are 60° to 66°.

#### TANGANYIKA TERRITORY—Status: U. N. trust territory.

Capital: Dar es Salaam (pop. 1952: 99,140).

Governor: Sir Edward F. Twining.

Foreign trade (1955)\*: domestic exports, £36,188,205 (36% to Britain); re-exports, £1,214,207; imports, £43,531,455 (41% from Britain). Chief exports: sisal (28%), coffee (20%), cotton (15%), diamonds.

Agricultural products (exports 1955): sisal (173,675 long tons), coffee (18,499

tons), cotton (45,636,800 lb.), peanuts, sugar cane, tea.

Minerals (exports 1955): gold (68,891 troy oz.), diamonds (322,661 carats).

Forest products: gum arabic and copal, beeswax, timber.

\* Import and re-export figures exclude outward transfers of imported goods to Kenya and Uganda.

Tanganyika Territory, with the Belgian Ruanda and Urundi, constituted German East Africa from 1884 until 1919. It was administered under League of Nations mandate by Britain until 1946, when it was placed under United Nations trusteeship, with Great Britain as the administering power.

Tanganyika's narrow coastal plain is bordered on the west by the precipitous eastern side of the Central African plateau. Mount Kilimanjaro (19,565 ft.) is the highest point on the African continent. The territory also includes adjacent islands in the Indian Ocean.

The territory is sparsely populated; two-thirds of it is uninhabited. In 1955 there were 25,000 Europeans, 72,500 Indians and Goans, 16,100 Arabs. It is the world's largest producer of sisal hemp. Most of the hemp, which is of the highest grade, is grown in the drier parts of the coast belt under European supervision. Stock raising is also important, but its progress is hampered by prevalence of the tsetse fly.

The climate generally is hot and humid on the coastal areas, with the temperature averaging 80° at Dar es Salaam. Rainfall in the capital averages 60 inches. Inland the rainfall and temperature are lower.

#### UGANDA—Status: Protectorate.

Capital: Entebbe (pop. 1948: 7,942).

Governor: Sir Andrew Cohen.

Foreign trade (1955)\*: domestic exports, £41,901,553 (29% to India); re-exports, £403,031; imports, £33,975,208 (46% from Britain). Chief exports: coffee (48%), cotton (39%).

Agricultural products (exports 1955): coffee (74,443 long tons), cotton (122,489,900 lb.), sugar cane, rubber, tea, sisal.

Minerals: gold, tin.

\* Import and re-export figures exclude outward transfers of imported goods to Kenya and Tanganyika.

Uganda lies immediately south of Anglo-Egyptian Sudan and west of Kenya, along the northwest shore of Lake Victoria. The surface is extremely diversified, with lofty plateaus, snow-capped peaks, swamps, forests and arid areas. A British protectorate over the area was proclaimed in 1894. A large measure of home rule is given the native states, notably Buganda, whose *kabaka* (king) is assisted by a ministry and native parliament.

Agriculture, including livestock, is the basis of the economy. Cotton is raised, principally by natives, and coffee, tea and rubber are grown on large plantations.

Most natives possess large herds of cattle and sheep. In 1955 there were 7,800 Europeans, 52,000 Indians and Goans and 1,900 Arabs.

Like the topography, the climate is extremely variable. At Entebbe, the mean temperature is about 70°.

#### **GAMBIA—Status: Colony and protectorate.**

**Capital:** Bathurst (population 19,602).

**Governor:** Sir Percy Wyn Harris.

**Foreign trade (1955):** exports, £2,641,830; imports, £3,709,752. **Chief export:** peanuts (89%).

**Agricultural products:** peanuts (exports 1955: 46,230 long tons), hides and skins, millet, rice, palm kernels.

Gambia, smallest of the British West African dependencies, is a stretch of land 200 miles long on both sides of the lower Gambia River, surrounded on all land sides by French West Africa and fronting on the Atlantic Ocean. During the 17th century it was settled by various companies of English merchants; slavery was the chief source of revenue until it was abolished in 1807. Gambia became a Crown colony in 1843. Except for the island of St. Mary, on which the capital stands, the area is administered as a protectorate.

The inhabitants, mostly Negroes or Negroids, are predominantly Mohammedan. The principal economic activity is the cultivation of peanuts. Internal transportation is by steamer and launch. Temperatures are fairly regular throughout the year, ranging from about 60° to 85°. Maximum rainfall is in August and September.

**GOLD COAST—Status: Colonies (Gold Coast Colony, 23,937 square miles; Ashanti, 24,379 square miles); protectorate (Northern Territories, 30,486 square miles); U. N. trust territory (Togoland, 13,041 square miles).**

**Governor:** Sir Charles Arden-Clarke.

**Prime Minister:** Kwame Nkrumah.

**Principal cities (census 1948):** Accra, 135,926 (capital); Kumasi, 59,420 (capital, Ashanti); Sekondi-Takoradi, 44,557 (rail terminus and port).

**Monetary unit:** Gold Coast pound.

**Languages:** Native tongues (Twi, Fanti, Ga), English.

**Religions:** Pagan, Mohammedan, Christian.

Early a center of the slave trade and of Anglo-Dutch rivalry, the Gold Coast, stretching along the Gulf of Guinea for 370 miles, became a British possession in 1871. Ashanti, in the interior, became a protectorate in 1896 and was annexed in 1901. The Northern Territories, to the north of Ashanti, were made a protectorate in 1901. Togoland, formerly German, was divided into French and British spheres and placed under League of Nations mandate after World War I, and under U. N. trusteeship in 1946.

Under the 1954 Constitution, the colony is virtually self-governing in internal affairs; it is administered by a Governor with an all-African Cabinet headed by a Prime Minister and a popularly elected Assembly of 104. Proposals for dominion status within the Commonwealth are receiving active consideration.

Except for 6,773 non-Africans (1948), the population is all Negro. Paganism is predominant; there are Mohammedan and Christian minorities.

The mainstay of the economy is the cultivation of cacao, in the production of which the Gold Coast leads the world (exports 1955: 205,875 long tons). Secondary export crops include palm kernels, copra, kola nuts, coffee and rubber. Livestock raising is important in the Northern Territories and along the coast east of Accra. Industry is not highly developed.

Recent foreign trade data (in millions of pounds):

	1953	1954	1955*
Exports	89.9	114.7	96.2
Imports	73.8	71.2	87.9

Chief exports in 1955 were cacao (68%), gold (9%), wood and lumber (8%) and diamonds (6%). Chief customers were Britain (41%), the U. S. (18%) and the Netherlands (11%); leading suppliers Britain (47%), Japan (10%) and the Netherlands (8%).

Railways total about 550 mi.; in 1954 3,671 mi. of trunk roads were open.

Mineral resources are abundant. Most important is gold, mined at Tarkwa in the colony and at Bibiani and Obuasi in western Ashanti (exports 1955: 723,908 oz.). Others include diamonds (2,276,533 carats), manganese ore (539,580 long tons) and bauxite (116,285 tons). Forest resources are extensive and large amounts of hardwoods, notably mahogany, are exported from the forest zone of the interior.

The coast is sandy, marshy and generally exposed. Behind it is a gradually widening grass strip. The forested plateau region to the north is broken by ridges and hills. The climate on the coast is hot and humid, ranging on the average from 78° to 80°. Rainfall is about 27 inches annually at Accra.

#### **KENYA (See EAST AFRICA HIGH COMMISSION)**

**MAURITIUS—Status: Colony.**

**Capital:** Port Louis (pop. 1954: 90,978). **Governor:** Sir Robert Scott.

**Foreign trade (1955):** exports (including re-exports), 252,935,106 rupees\* (81% to Britain); imports, 254,472,247 rupees (40% from Britain). **Chief export:** sugar (96%).

**Agricultural products:** sugar (1955: 533,000 metric tons), tea, tobacco, copra.

\* Includes value of sugar preference certificates.

Mauritius is a mountainous island of volcanic origin in the Indian Ocean, about 500 miles east of Madagascar. It was seized in 1810 from the French, who had settled it in 1715, and was formally ceded to Great Britain by the Treaty of Paris in 1814.

With over 600 persons per square mile, the island is one of the most densely populated regions in the world. The population has a large white element, chiefly French and British, but British Indians are predominant. There are many half-castes. The leading industry is sugar cultivation.

The climate is pleasant during the cool season, but extremely hot from December to April (90° to 96° at Port Louis). During this period there are also frequent torrents of rain and occasional severe cyclones.

**NIGERIA, FEDERATION OF—Status:** Colony and protectorate.

Governor general: Sir James Robertson. Principal cities (census 1952–53): Ibadan, 459,196 (native metropolis); Lagos, 272,000 (capital); Ogbomosho, 139,000 (native city); Kano, 130,000 (textiles, leather goods, cattle).

Monetary unit: Nigerian pound.

Languages: Native tongues, Arabic, English.

Religions: Mohammedan, Pagan, Christian.

Nigeria, with an area twice that of California, is situated on the Gulf of Guinea in West Africa. It was visited by European traders and explorers in the 16th and 17th centuries, and by the end of the 18th century British operators had a virtual monopoly in the area. Between 1879 and 1914, a series of private colonial developments by the British, together with reorganizations of the Crown's interest in the region, resulted in the formation of Nigeria as it exists today. During World War I, native troops of the West African frontier force joined with French forces to defeat the German garrison in the Cameroons. The Cameroons, a narrow strip along Nigeria's eastern border, became a League mandate after World War I, divided between France and Britain. Today the British Cameroons, a U. N. trust territory, is attached to Nigeria for administrative purposes.

Under the Constitution of Oct. 1, 1954, Nigeria is a federation of 3 regions (Northern, Western and Eastern), and the quasi-federal territory of the Southern Cameroons. The administration is headed by the Governor General, assisted by a Council of 14 ministers, of whom 4 are ex officio and 10 are selected from the federal House of Representatives of 184 popularly elected members. Certain subjects are reserved to the federal government; each region has an elected Assembly and a Cabinet headed by a Premier. Administration of the Southern Cameroons is headed by a Federal

Commissioner; there is a Legislative Assembly and an Executive Council. The Northern Cameroons is attached to the Northern Region.

The vast majority of the population is Negro, although in the north there has been an admixture caused by invasions of Fula, Berber and Arab or Arabized people. Mohammedanism is the dominant religion.

Most of the people are agriculturists. The staple food crops are durra (guinea corn), millet, yams, bananas and maize. Among the leading export crops are cacao (1955 exports: 74,000 long tons), peanuts (decorticated) (397,000 tons), palm kernels (433,000 tons), palm oil (182,000 tons) and rubber (30,400 tons). Hides and skins are also important export items. Aside from small native industry, there is no manufacturing.

Most external trade is with Britain. Chief exports are cacao, peanuts, palm kernels and oil and tin concentrates. Exports in 1955 totaled £132,000,000; imports, £135,800,000.

There is a substantial internal trade; Kano is a busy terminal for caravan routes. The Niger and several other rivers are navigable; otherwise, the 1,901 miles of railway are the chief means of transportation. Highway mileage totals about 21,000. The main ports, except Lagos, are on rivers. Air service is supplied by BOAC, Air France and other international lines.

Nigeria is a leading tin producer—8,160 long tons in 1955—from mines on the Bauchi plateau. Other minerals are coal, gold, lead, silver and tungsten. Over half the area is forested, but forest resources are comparatively unexploited. Mahogany is the main timber export.

All of Nigeria lies within the tropics, but the climate varies from tropical in the south to near temperate on some parts of the plateau. In the south the temperature varies between 70° and 100°, and averages upwards of 80°. Rainfall there is over 100 inches a year.

## FEDERATION OF RHODESIA AND NYASALAND

Governor General: Lord Llewellyn.

Prime Minister: Viscount Malvern.

Monetary unit: Rhodesian pound.

Foreign trade (1955): exports, £171,431,948\*; imports, £138,574,360. Chief exports: copper (38%), tobacco (15%), asbestos (4%).

\* Excluding gold valued at £6,487,178.

This is a federation of three British central African territories—Northern Rhodesia, Nyasaland and Southern Rhodesia. The federation embraces a block of territory (area 489,854 sq. mi.) extending southward for about 1,000 mi. from Tanganyika and the Belgian Congo to Bechuanaland and the Union of South Africa.



The federation came into existence on Oct. 23, 1953, when its Constitution took effect. The government is headed by the Crown-appointed Governor General, who is advised by a council of ministers headed by the Prime Minister. Legislative authority is vested in the Federal Assembly of 35 members, 17 from Southern Rhodesia, 11 from Northern Rhodesia and 7 from Nyasaland. Of these, 9 members (6 Africans and 3 Europeans) are specially elected or appointed to represent African interests. The federal government has exclusive control of several matters, including foreign affairs, defense, immigration, foreign trade, currency, transport and postal service.

The first general election for the Assembly took place on Dec. 15, 1953, and the first Assembly convened on Feb. 2, 1954.

**NORTHERN RHODESIA—Status:** Protectorate.

**Capital:** Lusaka (pop. 1953: 60,000).

**Governor:** Sir Arthur Benson.

**Agricultural products:** tobacco, maize, wheat.

**Minerals:** copper (1955: 383,232 long tons), cobalt, vanadium, lead, zinc.

Northern Rhodesia is in south central Africa. Much of the country consists of high plateau, with the Congo-Zambezi watershed rising in places to 5,000 feet. Rhodesia was assigned in 1889 to the British South Africa Company, headed by Cecil Rhodes. Administrative control was transferred to the Crown on Apr. 1, 1924.

Native tribes number from 50 to 60; there were 64,800 Europeans in 1956. More than 3,000,000 acres are owned and occupied by Europeans. Metals constitute almost all exports by value. Lead and zinc deposits occur at Broken Hill; copper at Bwana M'Kuba. The main line of the Rhodesian railway crosses the northern part of the colony from Livingstone to the Congo border. A number of the rivers are navigable.

Average temperature in the south ranges from about 65° in July to 80° or more in October. The rainfall occurs principally between November and April; it varies widely in different parts of the protectorate.

**NYASALAND—Status:** Protectorate.

**Capital:** Zomba (pop. about 5,000).

**Governor:** Sir Geoffrey F. T. Colby.

**Agricultural products:** tobacco (sales 1955: 22,743,000 lb.), tea, cotton.

Nyasaland, a British protectorate since 1891, is a narrow area lying between Mozambique, Northern Rhodesia and Tanganyika Territory along the southern and western shores of Lake Nyasa. Agriculture is the chief occupation, both of the European settlers and natives. Europeans numbered 6,700 in 1956.

The climate is extremely humid along the shores of Lake Nyasa, although the

temperature rarely rises above 95°. In the highlands, above 3,000 feet, average temperatures are considerably lower. The dry season, from May to September, is comparatively cool. Annual rainfall is about 35 inches in the lowlands and 50 inches in the highlands.

**SOUTHERN RHODESIA—Status:** Self-governing colony.

**Capital:** Salisbury (pop. 1953: 120,000).

**Governor:** Vice-Adm. Sir Peveril Williams-Powlett.

**Prime Minister:** R. S. Garfield Todd.

**Agricultural products:** tobacco (1955: 121,011,000 lb.), corn, peanuts, meat, hides and skins.

**Minerals (1955):** asbestos (105,261 long tons), gold (524,700 fine oz.), coal (3,653,801 tons), chrome ore (449,205 tons).

Southern Rhodesia is separated from Northern Rhodesia by the Zambezi River.

The country was settled in 1890 by the British South Africa Company, led by Cecil Rhodes. With the expiration of the company's charter, the white residents voted (1922) in favor of a responsible government of their own, and on Sept. 12, 1923, the country was annexed to Britain.

Southern Rhodesia has responsible government and a popularly elected Legislative Assembly of 30 members, but control of foreign relations and certain other matters is reserved to the federal government.

Most of the inhabitants are natives, but the country is well-adapted to European settlers, who in mid-1956 numbered 175,800. In addition, there were 13,030 Asiatics and half-castes. Mining is the basis of the economy. Farming ranges from ranching to tobacco growing, but mixed farming is becoming more common. Conditions for cattle raising and dairy farming are especially favorable. Manufacturing is of growing importance, with the factories producing goods valued at £61,871,000 in 1953. The colony is well served with railways, roads and airlines.

The hottest month is October (mean maximum 85.2°); the coolest are June, July and August, when frost is likely to occur. Generally the days are hot throughout the year, and the nights are frequently cool. Rainfall, averaging 28 inches annually, is greatest in October to December.

**ST. HELENA—Status:** Colony.

**Capital:** Jamestown (population 1,547).

**Governor:** Sir James Harford.

**Foreign trade (1955):** exports, £56,177 (96% to Britain); imports, £206,551 (52% from Britain). Chief export: hempen products (97%).

**Agricultural products:** flax, potatoes.

St. Helena is a volcanic island (47 sq. mi.) in the South Atlantic about 1,200 miles from the west coast of Africa. It

famous as the place of exile of Napoleon (1815-21). It was taken for Britain in 1851 by the British East India Company and became a Crown colony in 1833. Attached to it are Ascension Island (34 sq. mi.), 800 miles northwest, and the Tristan da Cunha group (45 sq. mi.), about 1,500 miles southwest. Most of the inhabitants are of mixed European, East Indian and African descent.

Although St. Helena is in the tropical zone, its climate is temperate and healthful; the temperature varies from 68° to 84° in summer and 57° to 90° in winter. Rainfall is extremely variable.

#### SEYCHELLES—Status: Colony.

Capital: Victoria (population 10,000).

Governor: Sir William Addis.

Foreign trade (1955): exports (domestic), 6,120,591 rupees (73% to India); imports, 8,862,676 rupees (39% from Britain). Chief export: copra (73%).

Agricultural products: cinnamon, patchouli oil, coconuts, maize, sugar cane.

This archipelago of about 92 islands in the Indian Ocean was seized from France by British troops in 1794 and was ceded to Great Britain by the Treaty of Paris in 1814. The principal island is Mahé (55 sq. mi.), about 600 miles northeast of Madagascar. The climate is temperate.

#### SIERRA LEONE—Status: Colony and protectorate.

Capital: Freetown (population: 64,576).

Governor: Maurice Dorman.

Chief Minister: M. A. S. Margal.

Foreign trade (1955): exports, £10,258,279 (69% to Britain); imports, £17,114,967 (60% from Britain). Chief exports: iron ore (37%), palm kernels (24%), diamonds (14%).

Agricultural products: palm kernels (exports 1955: 57,640 long tons), palm oil, rice, millet, cassava, rubber.

Minerals (exports 1955): iron ore (1,331,573 long tons), diamonds (401,423 carats), gold (241 troy oz.).

Forest products: palm kernels, piasava.

Sierra Leone lies on Africa's west coast between French Guinea and Liberia. It is a well-watered hilly country but has a low swampy coastland with an extremely unhealthy climate. The coastal area (colony proper) was ceded to English settlers in 1788 as a home for Negroes discharged from the British armed forces and also for runaway slaves who had found asylum in London. The British protectorate over the hinterland was proclaimed in 1896. It was not until 1928 that slavery was totally abolished in the protectorate. Under the 1951 Constitution there is a Legislative Council of 30 members, of whom 21 are elected directly or indirectly.

Freetown is the best harbor on the west coast. Iron ore (60% metal content) from deposits at Marampa is shipped from Pepel, northeast of Freetown.

#### SOMALILAND—Status: Protectorate.

Administrative center: Hargeisa (population, about 20,000 in hot season and 40,000 in cold season).

Governor: Sir Theodore Pike.

Foreign trade (1955): exports, £1,373,000; imports, £2,880,000. Chief export: hides and skins.

Agricultural products: cattle, hides and skins, grains.

Forest products: gums and resins.

British Somaliland extends along the Gulf of Aden for about 400 miles and inland for 80 to 220 miles. The interior is an elevated plateau falling in steep escarpments to the coastal plain. It came under Egyptian influence in 1875, but during the years 1884-86 treaties guaranteeing British protection were signed with the various Somali chiefs. Italian troops occupied the protectorate in 1940, but it was retaken by British troops in 1941. Both executive and legislative power is exercised by the Governor.

Most of the inhabitants are nomadic Somalis of Mohammedan faith. Their principal activity is stock raising. The climate is extremely hot and arid, with rainfall in the coastal areas averaging less than 8 inches. The average temperature at Berbera, on the coast, is 77° in January and about 98° in July.

#### SOUTH-WEST AFRICA (See UNION OF SOUTH AFRICA)

#### SWAZILAND (See BRITISH SOUTH AFRICAN PROTECTORATES)

#### TANGANYIKA & UGANDA (See EAST AFRICA HIGH COMMISSION)

## Union of South Africa

(Member of Commonwealth of Nations)

Area: 472,733 square miles.\*

Population (est. June 30, 1956): 13,915,000\* (European, 20.9%; Bantu, 66.9%; mixed, 9.2%; Asiatic, 3.0%).

Density per square mile: 29.6.\*

Ruler: Queen Elizabeth II.

Governor General: Ernest G. Jansen.

Prime Minister: Johannes G. Strijdom.

Principal cities (est. 1956): Johannesburg, 1,006,500 (gold, industrial center); Capetown, 687,900 (seat of legislature, seaport); Durban, 591,300 (seaport); Pretoria, 327,200 (seat of administration); Port Elizabeth, 231,400 (seaport).

Monetary unit: South African pound (£SA).

Languages: English, Afrikaans.

Religions (European pop., 1946): Dutch Reformed Churches, 55%; Anglican Church, 19%; Methodist, 6%; Presbyterian, 5%; Roman Catholic, 5%; others 10%.

\* Excluding South-West Africa.

HISTORY. After the discovery of the Cape of Good Hope in 1488 by Bartholomeu Diaz, the Dutch sent the first colonists to the area in 1652. The British seized the



territory in 1814 near the close of the Napoleonic wars, when Holland was France's ally. In protest against the British rule, thousands of Boers, settlers of Dutch descent, trekked northward between 1835 and 1838 and set up the republics of Orange Free State and Transvaal, subsequently recognized by the British.

The discovery of gold in Transvaal in 1886 brought an influx of English and other foreigners. British demands that these immigrants be enfranchised by the Transvaal government precipitated the South African War of 1899-1902, won by the British. By the Treaty of Vereeniging (May 31, 1902) the Boers renounced the independence of Transvaal and Orange Free State. In 1910, Cape Colony, Transvaal, Natal and the Orange Free State were set up as the Union of South Africa, with dominion status and with Louis Botha, a former Boer general, as the first prime minister. During World War I, South African forces seized German South-West Africa, over which the Union later received a mandate by the Treaty of Versailles.

When World War II broke out, there was considerable pro-German and anti-British feeling in South Africa. The country went to war against the Axis, however, under Prime Minister Jan C. Smuts.

In the elections of May, 1948, Smuts' United party was defeated by a Nationalist-Afrikaner coalition, which favored strict racial segregation. Enforcement of this policy led to severe racial disturbances and unrest and a prolonged constitutional crisis. The National party (merged with the Afrikaner party in 1951) was continued in office in the April 1953 elections. **GOVERNMENT AND DEFENSE.** The Union, as a self-governing nation, has its own Legislature, a Senate of 89 elected or appointed for ten years, and a House of Assembly of 159 members elected for five years. All legislators must be Union nationals of European descent, and suffrage is virtually limited to whites. The Queen is represented by a Governor General named by her after consultation with the Union. He can summon or dissolve the Senate and House, but a general election must be held at least once every five years.

In parliamentary elections held April 15, 1953, the National party won 94 seats, United party 57 and Labour party 5. Three seats are held by representatives of natives.

Political considerations made the draft inexpedient in World War II, and all members of the armed forces were volunteers. The postwar strength of the defense forces is fixed as follows: army, 4,640; air force, 3,319; navy, 863; a total strength of 8,822 as opposed to 5,549 in the prewar establishment. The navy, only slightly expanded in World War II, has 60 small vessels, including 2 destroyers and 3 frigates.

**SOCIAL AND ECONOMIC CONDITIONS.**  
*Education.* Education for white children is compulsory from 7-16. Primary education is free and, except for vocational schools and the 9 universities, all education is under provincial control.

In 1952 there were 2,662 state and state-aided primary and secondary schools for European scholars, who numbered 518,953, and 7,143 non-European schools with enrollment of 1,116,275. The 9 universities had 19,274 full-time students in 1953.

The official languages are English and Afrikaans. The latter, derived from 17th-century Dutch, is taught in almost all the schools. About 70 per cent of the population over 7 years old understands both languages. European and Asiatic immigration is strictly controlled.

*Agriculture.* South Africa is predominantly a pastoral country, with less than 15 per cent of its area considered arable. Sheep and cattle raising are the principal occupations, especially in the high veldt. Wool production in 1953-54 was estimated at 281,792,990 lb. In 1954 there were 37,141,579 sheep, 11,604,249 cattle and 491,140 hogs.

Climate and differences in terrain combine to give a great variety of agricultural products. The staple crop is maize, grown widely with a production varying from 1½ to 3 million tons annually. In southwest Cape Province, products of the Mediterranean type predominate, while in the coastal belt of Natal and in northern Transvaal, subtropical crops, especially sugar, are grown.

Production of leading crops in 1954-55 was estimated as follows: maize, 3,318,000 metric tons; wheat, 535,000 tons; tobacco, 17,200 tons; sugar, 752,000 tons.

*Manufacturing and trade.* Food, beverages and tobacco, and metal products are leading products. As a result of the need for armaments in World War II, the Union's manufacturing is no longer mainly devoted to agricultural processing. A wartime iron and steel industry was established, and cement, chemical, textile and auto assembly plants were expanded. Steel production (1955) was 1,741,681 short tons; pig iron, 1,434,101 tons; cement, 2,575,508 tons. In 1952-53 there were 16,064 factories with 819,658 workers; gross value of production was £SA1,165,224,000. The major industrial area is northern Transvaal.

Trade statistics (in millions of South African pounds):

	1953	1954	1955
Exports*	287.4	317.4	330.6
Imports	425.5	443.3	482.5

\* Excluding gold bullion.

Chief exports in 1955 (besides gold bullion estimated at £SA177,800,000) were



wool (18%), diamonds (10%), prescribed materials under Atomic Energy Act (9%) and fruit (7%). Leading customers were Britain (31%), Rhodesia and Nyasaland (15%) and the U. S. (8%); leading suppliers, Britain (35%), the U. S. (21%) and Germany (6%). Principal imports included textiles, farm and industrial machinery, motor vehicles and petroleum products.

**Communications.** The well-organized railway system, mostly Union-controlled, totaled 13,500 miles in 1953. Roads suitable for motor traffic amounted to 100,000 miles. **Finance.** Recent data are as follows (in millions of South African pounds):

	1952-53	1953-54	1954-55*
Revenue	255.1	283.0	306.4
Expenditure	297.7	327.0	343.4

\* Preliminary.

The gross public debt of the Union on Dec. 31, 1955, was £SA960,200,000, of which £SA74,800,000 was external.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The Union has a high interior plateau, or veldt, nearly half of which averages 4,000 feet in elevation. There are no important mountain ranges, although the Great Escarpment, separating the veldt from the coastal plain, rises to over 10,000 feet. The principal river is the Orange, rising in Basutoland and flowing westward for 1,300 miles through the Union's center to the Atlantic.

Extensive mineral resources account for the economic prosperity. The Union is the world's leading gold producer. Diamond production is now surpassed in importance by coal. Mineral production for 1955 included gold, 14,601,404 oz.; coal, 2,642,633 short tons; copper, 47,808 tons; diamonds, 2,633,280 carats; iron ore (60-75% metal content), 2,205,000 tons; (1954) asbestos, 109,000 tons; chromite, 705,500 tons; manganese ore, 771,000 tons; platinum, 344,430 oz. Uranium, antimony, gypsum, tin and tungsten also are mined.

The whaling industry, centered at Durban on the east coast, produces considerable amounts of whale oil. The Union has extensive fishery resources along the 1,500 miles of coast line.

Except for the western semi-arid regions, the climate is generally subtropical, much like that of northern Florida. Rainfall averages about 40 inches a year on the east coast and decreases sharply westward. The mean annual temperature is remarkably uniform; at Johannesburg it is 60.6°, with January the hottest month. Most of the rainfall occurs from October to March.

**SOUTH-WEST AFRICA—Status:** Mandate.

**Administrator:** Daniel du P. Viljoen.  
**Capital:** Windhoek (population 23,359).

**Foreign trade (1953)\*:** exports, £SA35,-178,261; imports, £SA24,069,726. Chief exports: karakul skins, butter, slaughter animals, diamonds.

**Agricultural products:** hides and skins, butter, corn, wheat.

**Minerals (1955:** 812,848 carats), vanadium concentrates, tungsten, lead, tin, iron ore, copper.

\* Includes trade with Union of South Africa.

The mandate, bounded on the north by Angola, and on the east by Bechuanaland and the Union of South Africa, was discovered by the Portuguese explorer Diaz in the late 15th century. It is for the most part a portion of the high plateau of South Africa with a general elevation of from 3,000 to 4,000 feet. It became a German colony in 1884 but was conquered by South African forces in 1915, becoming a Union mandate by the terms of the Treaty of Versailles. The Union of South Africa's application for incorporation of the territory into the Union was rejected by the United Nations assembly on Dec. 14, 1946, and the Union was invited to prepare a trusteeship agreement instead. By a law passed in April, 1949, however, the territory was brought into much closer association with the Union—including representation in the Union Parliament.

The country in general is better suited to grazing than to the raising of crops because of the light rainfall. The karakul sheep industry is particularly well-developed; in 1955, 2,864,246 pelts were exported. The principal port is Walvis Bay.

**ZANZIBAR—Status:** Protectorate.

**Capital:** Zanzibar (population 60,000).

**Sultan:** Seyyid Sir Khalifa bin Harub.

**British Resident:** Sir Henry Potter.

**Foreign trade (1955):** exports, £4,955,124 (47% to Indonesia); re-exports, £1,826,571; imports, £6,702,661 (28% from Britain). Chief export: cloves (80%).

**Agricultural products:** cloves (1955): 14,-537 long tons), clove oil, coconut oil, copra.

The protectorate consists principally of the islands of Zanzibar (640 sq. mi.) and Pemba (380 sq. mi.), just off the East African coast. Before 1890, the sultanate's territory also included a large area on the mainland, now comprising Italian Somaliland, Kenya and Tanganyika Territory. It was proclaimed a British protectorate Nov. 4, 1890. The British Resident administers the government, but the Sultan still retains considerable authority.

The principal industry is the production of cloves—about 80 per cent of the world supply.

The climate is excessively hot and moist, with a mean annual temperature of 80.5°. June to September is the coolest season of the year.

## WESTERN HEMISPHERE

**BAHAMAS**—Status: Colony.

Capital: Nassau (population 36,246).

Governor: Earl of Ranfurly.

Foreign trade (1955): exports (including re-exports), £1,208,502 (51% to the U. S.); imports, £10,859,926 (48% from the U. S.). Chief exports: lumber (22%), crawfish, pit-props.

Agricultural products: tomatoes, citrus fruit, sisal.

Sea products: sponges, lobsters, crawfish.

The Bahamas are an archipelago of about 3,000 islands, islets (cays) and rocks, east of Florida and north of Cuba, extending from N.W. to S.E. for about 800 miles. Only about 20 of the islands are inhabited; the most important is New Providence (20 sq. mi.) on which Nassau is located. The islands were reached by Columbus in Oct., 1492, and were a favorite pirate resort in the early 18th century. They have been a Crown colony since 1717. The Constitution provides for a nominated Legislative Council and a popularly elected Assembly. The Governor is advised by an Executive Council.

Over 80 per cent of the population is Negro. The tourist trade is of paramount importance, especially at Nassau, which is a favorite winter resort. In 1955, 132,394 tourists visited the colony. The climate is exceptionally agreeable, with mean temperatures ranging from 60° (January to March) to 88° (June to September). The rainy season is May through October; annual average fall at Nassau is 18 inches. Hurricanes occur usually from July to October.

**BARBADOS**—Status: Colony.

Capital: Bridgetown (population 13,345).

Governor: Sir Robert Arundell.

Prime Minister: Grantley H. Adams.

Foreign trade (1955): exports, BWI\$35,808,000 (45% to Britain); imports, BWI\$55,223,000 (40% from Britain). Chief exports: sugar (74%), molasses (12%), rum.

Agricultural products: sugar (1955: 151,229 long tons), cotton, maize, cassava.

Manufactures (1955): rum (1,878,710 wine gal.), molasses (19,781 long tons).

Barbados, an island east of the Windward group in the West Indies, has been a British possession since 1627; it is believed to have been first visited by the Portuguese. The colony has a nominated Legislative Council and a popularly elected Assembly of 24 members. Under a ministerial system of government inaugurated Feb. 1, 1954, the Prime Minister and 4 other members of the Executive Committee (all 5 being members of the Assembly) exercise executive responsibility for most of the departments of government, except defense and foreign affairs.

The island is very densely populated (about 1,380 per sq. mi.). About 77 per cent of the inhabitants are Negro, 5 per

cent white and the remainder of mixed blood. Approximately 70 per cent of the total area is cultivated and half of this is devoted to sugar, which is the staple product; there are sugar and molasses plantations and several rum distilleries.

Barbados has an agreeable climate, with temperatures that range between 70° and 86°, rarely below 65°. The cold season (December through May) is also the dry season; average annual rainfall is 60 inches with September the wettest month.

**BERMUDAS**—Status: Colony.

Capital: Hamilton (population 3,500).

Governor: Lt. Gen. Sir John Woodall.

Foreign trade (1955): exports, £138,875 re-exports, £3,300,094; imports, £13,408,490. Chief domestic exports: concentrated essences, brass electrical contacts.

Agricultural products: lily bulbs, potatoes, vegetables, arrowroot.

The Bermudas comprise an archipelago of about 360 small islands, 580 miles east of North Carolina. The largest is (Great) Bermuda or Main Island. Discovered by Juan Bermudez, a shipwrecked Spaniard early in the 16th century, the islands were settled in 1612 by an offshoot of the Virginia Company and became a Crown colony in 1684. The Governor is assisted by nominated Executive and Legislative Council and a popularly elected Assembly of 30 members. In 1940, sites on the islands were leased for 99 years to the U. S. for air and navy bases. Bermuda is also the headquarters of the West Indies and Atlantic Squadron of the Royal Navy. The most important factor in the colony's economy is the tourist trade; in 1955, 108,110 persons visited Bermuda. The arable land is devoted to horticulture rather than agriculture and a large selection of vegetables and flowers provide the principal crops. The colony does not approach self-sufficiency and is heavily dependent on food imports.

Bermuda possesses one of the most delightful climates in the world. The mean annual temperature is 71°, with extremes of 49° and 94°. Rainfall averages 58 in. annually.

**BRITISH GUIANA**—Status: Colony.

Capital: Georgetown (population 97,821).

Governor: Sir Patrick Renison.

Foreign trade (1955): exports (including re-exports), BG\$90,533,252 (36% to Britain, 36% to Canada); imports, BG\$94,517,619 (48% from Britain). Chief exports: sugar (44%), bauxite (27%), rice, rum.

Agricultural products (1955): sugarcane (250,111 long tons), rice (89,100 tons), copra, coffee, fruit.

Minerals (1955): bauxite (2,435,282 long tons), gold (23,766 oz.), diamonds (32,433 carats).

Forest products: balata, timber.

The only British possession in South America proper, British Guiana is on the northeastern coast between Venezuela and Surinam (Dutch Guiana). Settled by the Dutch in the 17th century, it was occupied by the British in 1796 and ceded to them at the end of the Napoleonic wars. Behind the low plain which contains the farm area is a higher area containing forest and mineral resources. A new Constitution inaugurated Apr. 1, 1953, provided for a bicameral Legislature, with a lower house largely elected under universal adult suffrage, and an Executive Council with a majority of ministers drawn from the lower house on whose advice the Crown-appointed Governor was bound to act. Following charges of Communist infiltration into the government, British military and naval reinforcements were dispatched to the colony; and on Oct. 9, 1953, the Constitution was suspended.

The heterogeneous population included (1955) East Indians, 48.3%; Negroes, 34.8%; mixed, 11.2%; Amerindians, Portuguese and other Europeans, and Chinese.

Cultivated areas cover only 155,000 acres, mostly devoted to rice and sugar cane. About 86 per cent of the colony is forested, but the vast forest resources are relatively unexploited. Timber resources have been estimated at 41,000,000,000 cu. ft. of merchantable timber. Railway mileage is 110, and highway mileage about 700.

The coastland climate is relatively hot and humid, with average temperatures of 78° in January and 81° in October, and only a slight variation between day and night. Inland temperatures are roughly 3° higher. Rainfall is heavy along the coast—about 88 in. annually at Georgetown.

**BRITISH HONDURAS**—Status: Colony. Capital: Belize (population 31,221). Governor: Colin Thornley.

Foreign trade (1954): exports (including re-exports), BH\$7,287,826; imports, BH\$11,409,568. Chief exports: mahogany, pine.

Agricultural products: bananas, sugar cane, citrus fruits.

Forest products (1954): cedar lumber (542,912 bd. ft.) and logs (51,461 cu. ft.), mahogany lumber (5,339,239 bd. ft.) and logs (81,415 cu. ft.), pine lumber (9,102,713 bd. ft.), chicle (11,039,000 lb.).

British Honduras is bounded on the north by Mexico and on the west and south by Guatemala. It was settled in 1662 by woodcutters from Jamaica. An irregular form of local government continued until 1871, when it became a Crown colony; it was separated from Jamaica in 1884. The Governor is assisted by an Executive Council and by a partially elected Legislative Assembly.

The colony's economy is dependent upon timber and other forest exports. Agriculture has never been adequately developed. There are no railways, and road develop-

ment is backward (about 135 mi. surfaced). Basic internal communications are by river. The Belize river is navigable, at least by light craft, for most of the year as far as the Guatemalan border, the other rivers for much shorter distances.

The extremely heterogeneous population included (1946) creoles (Negroes), 38.3%; mixed, 31%; Amerindians, 16.9%; Caribs, 7%; Europeans, 3.9%; and East Indians, 2.3%.

The climate is subtropical, with maximum recorded temperature of 98°, and minimum of 50°. Rain falls mostly from May to February, and almost continuously from October through December.

## Canada

(Member of Commonwealth of Nations)

Area (land only): 3,619,616 square miles.\*

Population (est. Jan. 1, 1956): 15,818,000 (1951: British 48%; French 31%; German 4%; Ukrainian 3%; others 14%).

Density per square mile: 4.4.

Ruler: Queen Elizabeth II.

Governor General: Vincent Massey.

Prime Minister: Louis Stephen St. Laurent.

Principal cities (census 1951): Montreal, 1,021,520 (seaport); Toronto, 675,754 (manufacturing center); Vancouver, 344,833 (Pacific seaport); Winnipeg, 235,710 (grain); Hamilton, 208,321 (iron and steel), Ottawa, 202,045 (capital); Quebec, 164,016 (seaport); Edmonton, 159,631 (petroleum); Calgary, 129,060 (farming).

Monetary unit: Canadian dollar.

Religions (census 1951): Roman Catholic 43%; United Church 20%; Anglican 15%; Presbyterian 6%; Baptist 4%; others 12%.

\* Total area, including water: 3,845,774 square miles.

**HISTORY.** The Norse explorer Leif Ericsson probably reached the shores of Canada (Labrador or Nova Scotia) in A.D. 1000, but the history of the white man in the country actually began in 1497, when John Cabot, an Italian in the service of Henry VII of England, reached the shore of Newfoundland or Nova Scotia. Canada was taken for France in 1534 by Jacques Cartier. The actual settlement of New France, as it was then called, began in 1604 at Port Royal in what is now Nova Scotia; in 1608 Quebec was founded. France's colonization efforts were not very successful, but French explorers by the end of the 17th century had penetrated beyond the Great Lakes to the western prairies and south along the Mississippi to the Gulf of Mexico. Meanwhile, the English Hudson's Bay Company had been established in 1670. Because of the valuable fisheries and fur trade, a conflict developed between the French and English; in 1713, Newfoundland, Hudson Bay and Nova Scotia (Acadia) were lost to England.

During the Seven Years' War (1756-63), England extended its conquest, and the



## Canadian Governors General and Prime Ministers Since 1867

Term of office	Governor General	Term	Prime Minister	Party
1867-1869	Viscount Monck	1867-1873	Sir John A. Macdonald	Conservative
1869-1872	Baron Lisgar	1873-1878	Alexander Mackenzie	Liberal
1872-1878	Earl of Dufferin	1878-1891	Sir John A. Macdonald	Conservative
1878-1883	Marquess of Lorne	1891-1892	Sir John J. Abbot	Conservative
1883-1888	Marquess of Lansdowne	1892-1894	Sir John S. D. Thompson	Conservative
1888-1893	Baron Stanley	1894-1896	Sir Mackenzie Bowell	Conservative
1893-1898	Earl of Aberdeen	1896(2 mos)	Sir Charles Tupper	Conservative
1898-1904	Earl of Minto	1896-1911	Sir Wilfrid Laurier	Liberal
1904-1911	Earl Grey	1911-1917	Sir Robert L. Borden	Conservative
1911-1916	Duke of Connaught	1917-1920	Sir Robert L. Borden	Unionist
1916-1921	Duke of Devonshire	1920-1921	Arthur Meighen	Unionist-National
1921-1926	Viscount Byng			Conservative
1926-1931	Viscount Willingdon	1921-1926	W. L. Mackenzie King	Liberal
1931-1935	Earl of Bessborough	1926(3 mos)	Arthur Meighen	Conservative
1935-1940	Baron Tweedsmuir	1926-1930	W. L. Mackenzie King	Liberal
1940-1946	Earl of Athlone	1930-1935	Richard B. Bennett	Conservative
1946-1952	Viscount Alexander	1935-1948	W. L. Mackenzie King	Liberal
1952-	Vincent Massey	1948-	Louis Stephen St. Laurent	Liberal

British general, Wolfe, won his famous victory over Montcalm outside Quebec (Sept. 13, 1759). The Treaty of Paris (1763) put Canada under English control.

At this time the population of Canada was almost entirely French, but in the next few decades thousands of British colonists emigrated to Canada from the British Isles and from the American colonies. Partly to placate the French who were concentrated in Quebec, Canada was divided into Upper (British) and Lower (French) Canada in 1791. In 1840 the two provinces again were joined under one government, and in 1849 the right of Canada to self-government was recognized. By the British North America Act of 1867, the Dominion of Canada was created through the confederation of Upper and Lower Canada, Nova Scotia and New Brunswick. Prince Edward Island joined the Dominion in 1873. In 1869 Canada had purchased from the Hudson's Bay Company the vast middle west (Rupert's Land) from which the provinces of Manitoba (1870), Alberta and Saskatchewan (1905) were later formed. In 1871 British Columbia joined the Dominion. The country was linked from coast to coast in 1885 by the Canadian Pacific Railway.

During the formative years between 1867 and 1896, the Conservative party led by Sir John A. Macdonald governed the country, except during the years 1873-78. In 1896 the Liberal party took over and under Sir Wilfrid Laurier, an eminent French Canadian, ruled until 1911. In World War I, more than 500,000 Canadian soldiers fought for the Allied cause. After the Treaty of Versailles, Canada, a full-fledged nation, was admitted to the League of Nations and appointed its own representatives in foreign countries. By the Statute of West-

minster (1931) the British Dominions, including Canada, were formally declared to be partner nations with Britain, "equal in status, in no way subordinate to each other," and bound together only by allegiance to a common Crown. The Liberal party under W. L. Mackenzie King won the elections in 1935 and was returned to power in 1940 and 1945 (he had previously served as Prime Minister from 1921 to 1930 except for three months in 1926). On Nov. 15, 1948, King resigned and was succeeded by Louis Stephen St. Laurent, who was returned as Prime Minister in the national elections of June 27, 1949, and continued in office by elections held Aug. 10, 1953.

Newfoundland became Canada's tenth province on March 31, 1949, following a plebiscite held July 22, 1948, in which the people voted by a narrow margin to unite with Canada.

**GOVERNMENT AND DEFENSE.** Canada, a self-governing member of the Commonwealth of Nations, is a federal union of 10 provinces whose powers are laid down in the British North America Act of 1867. The executive powers nominally rest in the hands of the Governor General, who represents the Queen and is appointed by her upon the recommendation of the Canadian government.

Actually, the Governor General acts only with the advice of the Canadian Prime Minister and the members of the Cabinet who at the same time sit in the federal Parliament. The Parliament has two houses: a Senate numbering 102 members appointed for life, and a House of Commons numbering 265 members apportioned according to provincial population. Elections are held at least every five years or whenever the party in power is voted down.

in the House of Commons or considers it expedient to appeal to the people. The Prime Minister is the leader of the majority party in the House of Commons. Laws must be passed by both houses of Parliament and signed by the Governor General in the Queen's name. Results of Parliamentary elections on Aug. 10, 1953, were as follows: Liberals, 170; Progressive Conservatives, 51; Co-operative Commonwealth Federation, 23; Social Credit, 15; Independents, 6.

The members of the Cabinet (June 1956) include Louis S. St. Laurent (Prime Minister), L. B. Pearson (External Affairs), George Marler (Transport), Milton Gregg (Labor), Stuart Garson (Justice, Attorney General), James Sinclair (Fisheries), C. D. Howe (Trade and Commerce, Defense Production), J. G. Gardiner (Agriculture), J. J. McCann (National Revenue), George Prudham (Mines and Technical Surveys), P. J. Martin (Health and Welfare), W. E. Harris (Finance), Ralph Campney (Defense), Hugues Lapointe (Veterans Affairs, Postmaster General), Robert H. Winters (Public Works), W. Ross Macdonald (Solicitor General), Jean Lesage (Resources and Development), J. W. Pickersgill (Citizenship and Immigration), and Roch Pinard (Secretary of State).

The ten provincial governments are nominally headed by Lieutenant Governors appointed by the federal government, but the executive power in each actually is vested in a Cabinet headed by a Prime Minister, who is leader of the majority party. In nine of the ten provinces the legislature is composed of a one-house assembly elected by the people for 4 years.

In Quebec there is a second chamber, the Legislative Council, composed of nominees of the Provincial Government.

**Judicial System.** The judicial system consists of a Supreme Court in Ottawa (established in 1875), with appellate jurisdiction, and a Supreme Court in each province as well as county courts with limited jurisdiction in most of the provinces. The Governor General in Council appoints the judges of these courts.

**Defense.** Canadian armed forces, consisting of the Army, Royal Canadian Air Force and the Royal Canadian Navy, are under the Ministry of National Defense. Conscription was in effect during World War II. Canadian casualties were 104,125, including 41,371 dead.

On June 30, 1954, the strength of the army was 49,851; air force, 46,856; navy, 7,251. Canadian troops and ships served in Korea. In Dec. 1955, the navy had in active service and reserve one light aircraft carrier, 2 cruisers, 11 destroyers, 52 frigates and escort vessels and numerous ancillary craft.

The Royal Canadian Mounted Police is

the constabulary maintained by the federal government. Among its duties are the enforcement of smuggling laws, suppression of traffic in drugs, protection of government buildings and dockyards, and counter-subversive work.

#### SOCIAL AND ECONOMIC CONDITIONS.

**Education.** Elementary schools in all provinces except Quebec are free, as is secondary education in most provinces. The supreme education authority in Quebec is a council of public instruction with two aides supervising the Roman Catholic and Protestant schools respectively. In the rest of the provinces the system is non-denominational, and education for the most part is compulsory for all children between the ages of 8 and 14. Of Canada's 28 universities, 7 are state-controlled and 21 are independent of provincial control.

#### PROVINCES AND TERRITORIES

Province	Land area, sq. mi.	Population June 1955 Est.
Alberta	248,800	1,066,000
British Columbia	359,279	1,305,000
Manitoba	219,723	849,000
New Brunswick	27,473	558,000
Newfoundland	152,734	412,000
Nova Scotia	20,743	683,000
Ontario	363,282	5,183,000
Prince Edward Island	2,184	108,000
Quebec	523,860	4,520,000
Saskatchewan	237,975	889,000
Territories		
Northwest Territories	1,258,217	18,000
Yukon	205,346	10,000

Provinces	Capital	Prime Minister 1956
Alberta	Edmonton	Ernest C. Manning <sup>1</sup>
British Columbia	Victoria	William Bennett <sup>1</sup>
Manitoba	Winnipeg	D. L. Campbell <sup>2</sup>
New Brunswick	Fredericton	Hugh J. Flemming <sup>3</sup>
Newfoundland	St. John's	Joseph Smallwood <sup>4</sup>
Nova Scotia	Halifax	Henry D. Hicks <sup>4</sup>
Ontario	Toronto	Leslie Frost <sup>5</sup>
Prince Edward Island	Charlottetown	A. W. Matheson <sup>4</sup>
Quebec	Quebec	Maurice Duplessis <sup>5</sup>
Saskatchewan	Regina	T. C. Douglas <sup>6</sup>
Territories		
Northwest Territories	Ottawa	R. G. Robertson*
Yukon	Whitehorse	F. H. Collins*

<sup>1</sup> Social Credit; <sup>2</sup> Liberal-Progressive; <sup>3</sup> Progressive Conservative; <sup>4</sup> Liberal; <sup>5</sup> Union Nationale; <sup>6</sup> Co-operative Commonwealth Federation.

\* Commissioner.

Leading universities are Toronto, which belongs to the first group, and McGill (Montreal), which belongs to the second group.

**Agriculture.** Agriculture, including horticulture, fruit-growing and the raising of stock and poultry, is the largest single industry. Canada is one of the world's greatest wheat-exporting countries; production is concentrated in Manitoba, Saskatchewan and Alberta. The estimated value of field crops in 1955 was \$1,564,561,000 (preliminary).

**Stock raising and dairy farming** have grown greatly since 1920. Ontario and Quebec are the most important dairying provinces. On June 1, 1955, Canada had 10,239,000 cattle, 8,079,000 hogs, 1,722,700 sheep and 901,400 horses. Dairy production in 1955 included butter, 159,124 short tons; milk, 8,650,000 tons; cheese (cheddar), 39,319 tons. Wool production in 1954 was 8,480,000 pounds, greasy basis.

**Industry.** Canadian manufactures rely mainly on domestic raw materials; growing industries which depend largely on materials imported in a raw or semi-finished state include the manufacture of automobiles, sugar and rubber goods as well as the iron and steel industry in Nova Scotia, Quebec and Ontario. The latter two provinces account for more than 80 per cent of all manufactures. The abundance of cheap water power is one of the chief factors in the growth of Canadian industry. Production of steel ingots and castings in 1955 was 4,529,401 short tons; pig iron, 3,213,764 tons. In 1954 the value of factory shipments was \$17,497,769,000 (preliminary); in 1953 there were 38,107 plants which employed 1,327,451 persons. The most important industries by value of output were pulp and paper, meatpacking, nonferrous-metals smelting and refining, sawmills, motor vehicles and petroleum products. Production of motor vehicles totalled 454,376 in 1955 (preliminary).

**Trade.** Canada is one of the great trading nations of the world. The bulk of its foreign commerce is in raw or semi-finished products.

**Trade statistics** (in millions of Canadian dollars):

Year	Imports	Exports	Re-exports
1952	4,030.5	4,301.1	54.9
1953	4,382.8	4,117.4	55.2
1954	4,093.2	3,881.3	65.6
1955	4,711.7	4,281.8	69.5

In 1955, Canada's principal customers were the U. S. (60%), Britain (18%), Japan (2.1%), western Germany (2.1%) and Australia (1.4%). Leading suppliers were the U. S. (73%), Britain (8.5%), Venezuela (3.9%), western Germany (1.2%) and Japan (.8%). The leading exports were newsprint (16%), planks and

## CROP ACREAGE AND PRODUCTION

(in thousands, provisional figures)

	Acres		Bushels	
	1954	1955	1954	1955
Wheat	24,267	21,506	308,909	494,111
Oats	10,161	11,178	306,793	408,888
Barley	7,856	9,933	175,509	282,222
Rye	851	780	14,176	14,743
Corn	418	507	22,339	31,515

boards (9%), wheat (8%), wood pulp (7%) and nickel (5%). Leading imports were machinery (non-farm) (9%), automobile parts (5%), crude petroleum (5%), farm implements and machinery (4%) and petroleum products (3%).

**Communications.** Because Canada's exports are to a large extent bulky raw materials, cheap water transportation is essential. The country's system of canals, especially those connecting the Great Lakes, forms an integral part of the inland communications system. Canal traffic amounted to 34,873,583 short tons in 1955. 20,893,222 tons of freight were carried on the Welland Canal alone.

Railway facilities have been improved in relation to the export of wheat from the prairie provinces and to the development of the mineral and wood pulp industries in northern Quebec and northern Ontario. About 90 per cent of the railway mileage of 43,000 (main-line track) is under the control of two systems, the government-owned Canadian National and the privately-owned Canadian Pacific. Canada's principal merchant marine lines are the Canadian Pacific, which operates a subsidiary ocean steamship company, and the Canadian National, which has minor steamship lines under its control. The merchant marine on Dec. 31, 1955, numbered 2,596 vessels (of over 100 tons) with tonnage of 2,079,322.

On Dec. 31, 1952, Canada had 181,300 miles of surfaced highways and 331,480 miles of nonsurfaced roads.

The Trans-Canada Air Lines, established in 1937, is controlled by the federal government. In 1955, Canadian airlines carried 3,246,105 revenue passengers and flew 1,220,364,393 passenger-miles. On Jan. 1, 1955, Canada had 3,857,400 telephones.

**Finance.** Recent data are as follows (in millions of Canadian dollars):

	1954-55	1955-56*	1956-57†
Revenue	4,123.5	4,385.4	4,775.5
Expenditure	4,275.3	4,437.1	4,650.0

\* Provisional. † Budget estimate.

The net public debt (gross debt less active assets) on Mar. 31, 1956, was reported at \$11,314,800,000, compared to \$11,263,100,000 on Mar. 31, 1955, \$11,151,600,000 on Mar. 31, 1954, \$11,161,700,000



on Mar. 31, 1953, and \$3,648,691,449 on Mar. 31, 1941.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Covering most of the northern part of the North American continent and with an area larger than that of the United States, Canada's topography is extremely diversified. The northeastern region, including most of Quebec, northern Ontario and Manitoba, and the Northwest Territories, with Hudson Bay in the center, is an important source of minerals, wood pulp and water power. In the east the mountainous maritime provinces have an irregular coast line on the Gulf of St. Lawrence and the Atlantic. The St. Lawrence plain, covering most of southern Quebec and Ontario, and the interior continental plain, covering southern Manitoba and Saskatchewan and most of Alberta, are the principal cultivable areas. They are separated by a forested plateau rising from Lakes Superior and Huron. Westward toward the Pacific, most of British Columbia, Yukon, and part of western Alberta are covered by parallel mountain ranges including the Rockies. The Pacific border of the coast range is ragged with fiords and channels. The highest point in Canada is Mt. Logan, 19,850 ft., located in the Yukon.

Average annual rainfalls at various cities are as follows, in inches: Calgary, 15.8; Winnipeg, 20.2; Victoria (B.C.), 30.9; Toronto, 31.3; Ottawa, 32.5; Quebec, 42.1.

Canada has an abundance of large and small lakes. In addition to the Great Lakes on the United States border, there are nine others which are more than 100 miles long and 35 which are more than 50 miles long.

The two principal river systems are the Mackenzie and the St. Lawrence. The St. Lawrence with its tributaries is navigable for over 1,900 miles and is the commercial artery of eastern Canada.

As most of the Canadian rivers have waterfalls on their courses they are of considerable importance as sources of power. Average monthly production of electricity in 1955 was 6,358,000,000 kwh.

**Minerals.** Canada's mineral resources are both rich and varied. Mining production in 1955 was valued at \$1,778,398,272. Metals

come mainly from two widely separated regions, the mountain ranges of the Pacific coast and the province of Ontario. Copper ore also exists in Quebec, Manitoba and Newfoundland. Production of petroleum centers in Alberta. There are important deposits of uranium in the Northwest Territories.

**Forests and Fisheries.** The total area of land covered by forests is estimated at 1,290,960 square miles, of which 435,000 are productive and accessible. Production of sawn lumber was estimated at 7,916,000,000 bd. ft. in 1955. The manufacture of pulp and paper is one of the leading industries. Newsprint production in 1955 was estimated at 6,190,647 short tons; exports were 5,763,167 tons, of which 5,027,767 tons went to the U. S.

Fishing, Canada's oldest industry, is carried on along the Atlantic and Pacific coasts and on the inland lakes. The most important fish are salmon, cod, herring, mackerel, lobsters, sardines, halibut, haddock, whitefish and trout. The total value of fishery production in 1954 (excluding Newfoundland) was \$163,541,100; the catch totaled 14,321,540 cwt.

**Climate.** Canada has great variations of climate. South of the Gulf of St. Lawrence, the maritime provinces have an average temperature of 40° for the year and over 60° for the summer months. In Quebec and northern Ontario the winters are cold and the summers average from 60° to 65°. In southern Ontario the average summer temperature is 65°, with an occasional rise to 90°. The prairie provinces have a distinctly continental climate with comparatively short warm summers and long cold winters. The west coast has a climate similar to that of the southern coast of England. Northwest and northeast of Hudson Bay the climate is too severe for trees.

#### FALKLAND ISLANDS AND DEPENDENCIES—Status: Crown Colony.

Governor: O. R. Arthur.

Capital: Stanley (population 1,246).

Foreign trade (1954): exports, £6,270,559; imports, £3,172,912. Chief export: whale oil.

This sparsely inhabited Crown colony consists of a group of islands in the south Atlantic about 250 miles east of the South American mainland. Dependencies include all islands and Antarctic territory between 20° and 50° w. long., south of 50° s. lat., and between 50° and 80° w. long., south of 58° s. lat. The chief industry is sheep raising, and apart from the production of wool, hides and skins and tallow, there are no known resources. The whaling industry is carried on successfully from South Georgia Island; 281,107 barrels of whale oil were exported in 1954.

The islands were discovered by John

#### MAJOR MINERALS

	1954	1955*
Asbestos (tons)	924,116	1,055,266
Coal (tons)	14,913,579	14,578,821
Copper (lb.)	605,464,042	649,207,453
Gold (oz.)	4,366,440	4,556,400
Iron ore (tons)	7,361,598	17,377,252
Lead (lb.)	436,990,488	387,948,053
Nickel (lb.)	322,557,961	349,161,430
Petroleum (bbl.)	96,080,345	128,811,000
Silver (oz.)	31,117,949	27,901,427
Zinc (lb.)	752,982,353	853,931,313

\* Provisional.

Davis in 1592. East Falkland Island was claimed for France in 1764, and West Falkland Island for Britain the following year. The French settlement later passed to Spain, and in 1829 was colonized by Argentina. The Argentines were ejected by the British in 1833 and have since reasserted their claim to the islands many times. In 1914 the Battle of Falkland Islands was fought nearby, resulting in a British victory.

The climate is equable though relatively cold, with temperatures averaging about 47° in midsummer and 37° in midwinter.

#### JAMAICA AND DEPENDENCIES—Status: Colony.

Capital: Kingston (population 201,911).

Governor: Sir Hugh Foot.

Chief Minister: Norman W. Manley.

Foreign trade (1955)\*: exports, £32,726,-454 (51% to Britain); re-exports, £901,270; imports, £45,672,752 (40% from Britain). Chief exports: sugar, bauxite, bananas, rum.

Agricultural products (1954): sugar (exports: 321,398 long tons), bananas (exports: 11,637,074 stems), rum, citrus fruits, ginger, coffee, pimento.

Mineral: bauxite (exports 1954: 1,752,-219 long tons).

\* Excluding dependencies.

Jamaica, the largest island in the British West Indies (4,470 sq. mi.), is eighty miles south of the eastern end of Cuba. Its island dependencies include the Turks and Caicos Islands (about 600 mi. N.E.), Cayman Islands (about 300 mi. N.W.) and two uninhabited cays. It was discovered by Columbus in 1494 and remained in Spanish possession until 1655, when it was taken by the British. According to the Constitution of Nov. 20, 1944, as amended in 1953, the Governor is assisted by a House of Representatives of 32 popularly elected members; a Legislative Council (upper house) of 15 members and an Executive Council of 10 members, of whom the Chief Minister is appointed by the Governor subject to the approval of the House.

Sites were leased for 99 years to the U. S. in 1940 for naval and air bases.

The population includes Negro, 77.7%; mixed, 18.6%; East Indian, white and Chinese.

The colony's economy depends on agriculture, and about 200,000 acres are under cultivation. Sugar took the place of bananas as the chief crop during World War II. Jamaica is virtually the sole source of pimento.

Jamaica's favorable climate makes it attractive to tourists. Temperatures at Kingston range from about 71° to 88°, but are considerably cooler inland. The rainy seasons are in May and October; total fall is about 65 inches a year (33 at Kingston).

#### LEEWARD ISLANDS—Status: Colony.

Capital: St. John's (population 12,500).

Governor: Sir Kenneth Blackburne.

Foreign trade (1954): exports, £2,560,000; imports, £3,990,000. Chief export: sugar.

Agricultural products: sugar, cotton, coconuts, citrus fruits, tobacco.

The Leeward Islands constitute a federated group southeast of Puerto Rico; they are divided into four presidencies—Antigua (108 sq. mi.) and dependencies (63 sq. mi.); Virgin Islands (67 sq. mi.); St. Kitts (68 sq. mi.) and Nevis (50 sq. mi.) and dependency (34 sq. mi.); and Montserrat (33 sq. mi.). The whole federation has a nominated Executive Council and a partially elected Legislative Council. Each presidency also has a local administration. In 1940, the U. S. acquired a 99-year lease on sites for a naval and air base on Antigua. The islands are agricultural.

Temperatures average about 76° in January and 81° in August.

#### TRINIDAD AND TOBAGO—Status: Colony.

Capital: Port of Spain (population 117,000).

Governor: Sir Edward Beetham.

Foreign trade (1955): exports, BWI\$278,984,551 (40% to Britain); re-exports, BWI\$6,941,937; imports, BWI\$294,666,049 (38% from Britain). Chief exports: crude petroleum and products (76%), sugar (11%), cacao (4%).

Agricultural products: raw sugar (1955: 192,800 long tons), cacao, coconuts, citrus fruit.

Manufactures: petroleum products (1955: 38,631,000 bbl.).

Minerals (1955): crude petroleum 24,896,000 bbl., asphalt (136,729 long tons).

The islands of Trinidad and Tobago are 16 and 21 miles, respectively, off Venezuela; just north of the Orinoco delta. Both were discovered by Columbus in 1498, and remained Spanish possessions until 1797 when the British took them. They are administered by a Governor, assisted by an Executive Council and a Legislative Council with unofficial elected majorities. In 1941 the United States was granted 99-year leases on the islands for naval and air bases covering a total of 25,000 acres.

The soil is rich for the growing of tropical products; sugar and cacao are the principal crops. Trinidad is one of the leading oil producers of the Commonwealth and the world's most notable source of asphalt, found in Pitch Lake, thirty-eight miles southeast of Port of Spain. Port of Spain is the chief port, and a transshipment point for Orinoco trade. There are several oil refineries. The population includes Negro, 46.8%; East Indian, 35.1% mixed, 14.1% and white.

Trinidad's climate is tropical, with a mean annual temperature of 80°. The rainy season is from May to January (ex-

cept October). Total annual rainfall is about 65 inches at Port of Spain and varies from 50 to 120 inches elsewhere throughout the colony.

**WINDWARD ISLANDS**—Status: Colony. Capital: St. George's (population 20,832). Governor: Colville M. Deverell.

Foreign trade (1954): exports, £4,410,000; imports, £4,970,000.

Agricultural products: arrowroot (St. Vincent), nutmeg (Grenada), mace (Grenada), cacao.

These islands, four in number, form the southern portion of the Lesser Antilles in the Caribbean; they extend approximately 150 miles from the French colony of Guadeloupe on the north to the British colony of Trinidad on the south. Their total area of about 820 square miles divides as follows: Dominica, 304; St. Lucia, 133; St. Vincent, 150; Grenada, 133. The four units are not federated and have no common legislature or laws, although they do have a common Governor.

More than two-thirds of the inhabitants are Negroes, nearly one-third mulatto, and about 2 per cent white. Agriculture is the only industry. St. Vincent has a virtual monopoly on the world supply of arrowroot, and Grenada furnishes about 40 per cent of the world's nutmeg.

Climate is pleasant, although rainfall is heavy, particularly in summer, amounting in places to as much as 200 inches a year (80 at St. George's). The temperature in January averages 77°, in September, 80°.

## ASIA

**ADEN**—Status: Colony and Protectorate. Governor: Sir William Luce.

Foreign trade (1954): exports and re-exports, £20,184,383; ships' stores and bunkers, £24,163,252; imports, £64,883,735.

The British colony and protectorate of Aden is situated on the volcanic southern tip of the Arabian peninsula, along the Gulf of Aden. The colony (port) of Aden was annexed to Britain in 1839 and was part of the Bombay Presidency until 1932, when it became a separate province with the Chief Commissioner responsible to the Indian government. In 1937 it was transferred from Indian to Imperial control as a Crown colony. It is administered by a Governor and Commander in Chief aided by an Executive Council. The 20-odd Sultans who rule their respective territories in the protectorate are responsible to him.

The island of Perim (5 sq. mi.), the Muria Muria islands, and the island of Kamaran (22 sq. mi.) are attached administratively to Aden.

Aden colony is essentially a transshipment point and bunkering station and is also the commercial center for the Yemen and the African coast opposite. Aden airport is a station on the Khartoum-Karachi

air route. Agriculture is unimportant except for some coffee and tobacco, and except for the large petroleum refinery of the British Petroleum Co. Ltd. (formerly Anglo-Iranian Oil Co.), which went into operation in 1954, manufacturing activity is limited to salt, cigarettes and dhows.

**BAHREIN ISLANDS**—Status: Protectorate and Sheikdom.

British Political Agent: C. A. Gault.

These islands form an archipelago off Arabia's east coast and are nominally an independent sheikdom, ruled by Sheik Sir Salman bin Hamad al Khalifah, but are actually a protectorate of Great Britain, which is represented by a Political Agent. They are the center of the Persian Gulf pearl fisheries and the site of an airport on the London-Australia route. The concession for exploitation of petroleum deposits, discovered in 1932, is held by an affiliate of U. S.-owned interests. Output in 1955 was 10,981,537 barrels. Production at the Bahrain refinery in the same year was 74,352,718 barrels. Agriculture is of some importance. Most of the trade of the Saudi Arabian provinces of Nejd and Hasa pass through Bahrain. Chief exports are rice, cotton goods, pearls, coffee and tea. The capital is Manama.

## BORNEO

**COLONY OF NORTH BORNEO**—Status: Colony.

Capital: Jesselton (population 11,704).

Governor: Sir Evelyn Turnbull.

Foreign trade (1955)\*: exports, Mal.\$104,762,215 (22% to Britain); imports, Mal.\$87,586,857 (26% from Britain); Chief exports: rubber (44%), timber (20%), copra.

Agricultural products: rubber (exports 1955, 20,063 long tons), rice, copra.

Forest products: timber, cutch, rattans.

\* Excluding transit trade.

The Colony of North Borneo, constituting the extreme northern portion of the island of Borneo, consists largely of highlands and occasional open valleys and plateaus. The territory was a British protectorate administered under a royal charter by the British North Borneo Company from 1881 until July 15, 1946, when it assumed the status of a Crown colony. It was occupied by Japanese troops from 1942 until 1945. Labuan (pop. 9,000; area, 30 sq. mi.), a small island off the North Borneo coast, was transferred from the jurisdiction of the Straits Settlements to that of North Borneo in 1946.

The population is comprised largely of aboriginal tribesmen living on a very primitive level of culture and social organization. In 1951, 72.7% of the population was native, 22.3% Chinese; there were 1,213 Europeans. Mineral resources are believed to be considerable, but the colony's income is based on agricultural and jungle produce.



The climate of North Borneo is tropical, with a mean annual temperature range of only 3°, although extremes of 64° and 91° have been recorded. The total rainfall varies between 60 and 180 inches annually and is heaviest in the last three months.

**BRUNEI**—Status: Protectorate.

Capital: Brunei (population 11,000).

Sultan: Omar Ali Saifuddin.

British Resident: J. O. Gilbert.

Foreign trade (1955): exports, Mal.\$291,-609,731; imports, Mal.\$104,621,593. Chief export: petroleum (99%).

Agricultural products: rice, rubber.

Minerals: petroleum (1955: 33,750,000 barrels).

Brunei lies on the northwestern coast of Borneo, entirely surrounded by Sarawak. It was placed under British protection in 1888, and in 1906 a treaty was concluded whereby the native Sultan yielded administration of the state to a British Resident. The Governor of Sarawak was appointed High Commissioner for Brunei in 1948. Japanese occupied Brunei in 1942-45.

Most of the inhabitants are Malays and Borneans; in 1947 there were 7,727 Chinese and 610 Europeans. The bulk of the population lives in and around the capital, situated on the Brunei River 9 miles from its mouth. The interior is largely forested and contains rich timber. All petroleum is exported to Sarawak for refining.

Brunei's climate is comparable to that of North Borneo, except that the wet season is longer, often lasting until March.

**SARAWAK**—Status: Colony.

Capital: Kuching (population 40,000).

Governor: Sir Anthony F. Abell.

Foreign trade (1955): exports, Mal.\$477,-463,557; imports, Mal.\$441,058,106. Chief exports: petroleum and products (69%), rubber (16%), pepper (6%).

Agricultural products: rubber (exports 1955: 39,411 long tons), pepper, copra, rice.

Minerals: petroleum, gold, silver, coal.

Sarawak extends along the northwestern coast of Borneo for about 500 miles. In 1841 part of the present territory was granted by the Sultan of Brunei to Sir James Brooke. The state, enlarged by additional concessions made between 1861 and 1905, continued to be ruled by members of the Brooke family until the Japanese occupation in Dec. 1941. A British protectorate since 1888, Sarawak became a Crown colony July 15, 1946, through agreement between the British government and the then ruling Rajah, Sir Charles Vyner Brooke.

The colony is mountainous and very well watered; inland communication is largely by water. Most of the inhabitants are Malays, Dyaks and Chinese; there were 691 Europeans in 1947. The most important mineral is petroleum, which was discovered at Miri in 1909 and subsequently worked by Sarawak Oilfields, Ltd. A large

proportion of the petroleum exports reflects petroleum imported from Brunei and refined in Sarawak. There are also important forest resources. Under the enlightened rule of the Brookes, Sarawak became a highly organized community.

Sarawak's climate is healthful; the temperature seldom rises above 90° and falls to 70° at night. Average annual rainfall at Kuching is 160 inches.

## Ceylon

(Member of Commonwealth of Nations)

Area: 25,332 square miles.

Population (est. July 1, 1955): 8,589,000 (1953: Sinhalese, 69%; Tamil, 21%; Moors, 6%; Burghers and Eurasians, .5%; Europeans, [6,909] and others, 3.5%).

Density per square mile: 339.2.

Ruler: Queen Elizabeth II.

Governor General: Sir Oliver Goonetilleke.

Prime Minister: S.W.R.D. Bandaranaike.

Principal cities (census 1953): Colombo, 424,816 (capital); Jaffna, 76,664 (fibers, tobacco); Kandy, 57,013 (tea); Galle, 55,825 (seaport).

Monetary unit: Ceylonese rupee.

Languages: English, Sinhalese, Tamil.

Religious (est.): Buddhism, 61%; Hinduism, 22%; Mohammedanism, 9%; Christianity (mainly Roman Catholic), 7%; others, 1%.

**HISTORY.** The island of Ceylon lies in the Indian Ocean 12 miles southeast of the southern tip of India. Known to the Greeks and Romans as Taprobane and to Mohammedan seamen as Serendib, it is reputed to have been invaded from India in 504 B.C. by Vijaya, the first Sinhalese King. Buddhism was introduced in the third century A.C. In subsequent centuries the island was invaded and occupied several times by Indian princes.

Ceylon was visited in 1505 by the Portuguese, who found the island divided into seven native kingdoms. The Portuguese settlers were ousted in the middle of the 17th century by the Dutch, who in turn were defeated by an English force in 1796. Ceylon became a Crown colony in 1796, and was formally ceded to England by the treaty of Amiens in 1802.

The Donoughmore Constitution of 1931 vested control over most local affairs in a State Council, which had an elected majority. The arrangement proved generally unacceptable, and after World War II a commission which was headed by Lord Soulbury drafted another Constitution. The Ceylon Independence Act received royal assent on Dec. 10, 1947, and on Feb. 4, 1948, Ceylon became a full-fledged, self-governing dominion, with Stephen Senanayake as Prime Minister. On his death Mar. 22, 1952, his son Dudley took office. The latter resigned on account of ill health.

on Oct. 12, 1953, and was succeeded by Sir John Kotelawala. The leftist People's United Front won the April 1956 elections and its leader, S.W.R.D. Bandaranaike, formed a new government on April 12.

**GOVERNMENT.** Under the 1946 Constitution, Ceylon's government is headed by the Crown-appointed Governor General, who is advised by a Council of Ministers headed by the Prime Minister. The bicameral Parliament consists of a House of Representatives of 101 members (95 elected by full adult suffrage), and a Senate composed of 15 elected and 15 appointed members.

Elections of April 1956 returned to the House of Representatives 51 People's United Front, 14 Socialists, 10 Federalists, 8 United Nationalists, 3 Communists and 9 others.

The 1947 defense agreement permits the stationing of British troops on the island. The Royal Navy has an extensive base at Trincomalee.

**SOCIAL AND ECONOMIC CONDITIONS.** Free education is available in public schools from kindergarten to university. The illiteracy rate in 1946 (5 years and over) was 42.2%. In 1955, there were 6,106 Sinhalese and Tamil schools with 1,324,771 pupils and 649 English schools with 312,237 pupils. The University of Ceylon (founded in 1942) had 2,000 students in 1954.

Ceylon is heavily dependent on food imports, particularly rice, the staple food. A large part of the cultivated land (25% of the total area) is devoted to the chief export crops—tea (1955: 380,012,747 lb.), rubber (1955: 93,830 long tons) and coconut products, all of which are grown for the most part on plantations. Other crops include rice (1955: 35,700,000 bu. paddy), fruits, cinnamon and citronella. In 1954, there were 1,276,178 cattle, 699,190 buffalo and 542,824 goats.

Recent foreign-trade data are as follows (in millions of Ceylonese rupees):

	1953	1954	1955
Exports	1,568	1,809	1,940
Imports	1,610	1,397	1,460

Chief exports by value in 1955 were tea (62%), rubber (17%) and coconut oil (6%). Leading customers were Britain (26%), the U.S. (9%) and Australia (8%); leading suppliers, Britain (21%), India (17%) and Burma (8%).

Ceylon is well served by highways and the government railway, which total 18,560 and 894 miles, respectively. A fast ferry connects railheads in India and Ceylon.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Most of the island is flat, but mountains in the south rise to 8,000 feet. The island extends to a maximum of 270 miles north and south, and 140 miles east

and west. There are numerous rivers, the longest of which is the Mahaweli-Ganga (206 miles).

Mineral resources include graphite (plumbago) (1955 exports: 9,878 long tons), gem stones, mica, magnesite and vanadium; uranium deposits have been reported.

A distinctive feature of Ceylon's climate is the monsoon, which appears in May and in October–November. Annual rainfall varies from 40 inches in the northeast to more than 200 in the southwest. The mean annual temperature at Colombo is 80.5°.

**CYPRUS—Status: Colony.**

Capital: Nicosia (pop. 1955: 43,000).

Governor: Field Marshal Sir John Harding.

Foreign trade (1955): exports, £17,535,084 (35% to western Germany); re-exports, £821,621; imports, £30,420,487 (50% from Britain). Chief exports: pyrites (27%), cupreous concentrates (24%).

Agricultural products: barley, wheat, potatoes, wine, fruit.

Minerals: copper ore (concentrates), pyrite ore.

Cyprus, third largest island in the Mediterranean, is roughly equidistant from Asia Minor to the north and Syria to the east. The site of early Phoenician and Greek colonies, it passed in 1571 from the rule of Venice to that of the Ottoman Empire, under which it remained until 1878, when it was ceded to Great Britain for administrative purposes. On the outbreak of hostilities with Turkey in World War I (Nov. 5, 1914), the island was formally annexed to Great Britain.

The Governor is advised by a nominated Executive Council, but he alone possesses the lawmaking power.

Demands for self-determination and union with Greece, marked by terrorism, became a major problem in 1955.

The people are mainly Greeks (80.8%) and Turks (17.7%), although there is an Armenian colony and a small Latin colony. More than 80 per cent of the population is Christian. Agriculture is the principal industry. Sponge fishing is also important, as well as copper mining.

The mean annual temperature is about 69°; annual rainfall averages about 19 inches.

**HONG KONG—Status: Colony.**

Capital: Victoria (population 767,000).

Governor: Sir Alexander Grantham.

Foreign trade (1955): exports, £159,000,000; imports, £232,000,000. Chief export: textiles.

Agricultural products: rice, sugar cane. Major industries: shipbuilding, rope making, cement, sugar refining, textiles.

The colony of Hong Kong comprises the island of Hong Kong (32 sq. mi.), Stone-



cutters' Island, and the Kowloon peninsula and the New Territories on the adjoining mainland. The island of Hong Kong, located at the mouth of the Canton River about 90 miles southeast of Canton, was ceded to Britain in 1841.

Stonecutters' Island and Kowloon were annexed in 1860, and the New Territories, which are mainly agricultural lands, were leased from China in 1898 for 99 years. Hong Kong was attacked by Japanese troops Dec. 7, 1941, and surrendered the following Christmas Day. It remained under the occupation of the Japanese until Sept., 1945.

Possessing an excellent natural harbor 17 miles in extent, the only safe deep-sea anchorage between Shanghai and Indo-China, Hong Kong is the entrepôt for trade throughout southern China and the western Pacific.

The cities of Victoria and Kowloon contain the greater part of the population, which is overwhelmingly Chinese. Besides those Chinese engaged in agriculture or industry, a large population lives in sampans or junks either in Victoria Harbour or neighboring bays, supporting itself by fishing or by laboring on the wharves.

Hong Kong has an agreeable climate, although violent typhoons sometimes descend upon the Colony. The average annual temperature is 72°, ranging from 59° in February to 82° in July. Rainfall is about 85 inches a year.

**MALAYAN FEDERATION and SINGAPORE**—Status: Protectorates and Crown Colony.

Capital: Singapore (population 1947: 441,885).

Federation Capital: Kuala Lumpur (population 1947: 176,195).

Commissioner General in Southeast Asia: Sir Robert Scott.

High Commissioner of Malayan Federation: Sir Donald MacGillivray.

Governor of Singapore: Sir Robert Black. Chief Minister, Singapore: Lim Yew Hock.

Foreign trade (1955): exports, Mal. \$4.-156,334,015 (18% to Britain); imports, Mal. \$3,821,858,170 (30% from Indonesia). Chief exports: rubber (56%), tin (10%), coconut oil (2%).

Agricultural products (1955): rubber (639,128 long tons), rice (410,590 tons), coconut oil (128,613 tons), tea, pineapples.

Minerals (1955): tin (61,245 long tons), iron ore (1,466,184 tons), coal (206,118 tons), bauxite (22,162 tons), tungsten, manganese ore.

Forest products: timber, damar, jelutong.

The Federation consists of semi-independent states occupying most of the Malay peninsula and the island of Singapore off the peninsula's southern tip, together with several smaller islands. The native states were brought under British

administration by a process of commercial and political exploitation in the late 19th and early 20th centuries. Singapore, founded in 1819 by Sir Stamford Raffles, had been developed into the principal British naval base in the Far East prior to World War II. Japanese troops invaded the Malayan States in Dec. 1941, and captured Singapore Feb. 15, 1942.

The Malayan Federation was established in 1948 to replace the Malayan Union, which was created in 1946. It comprises the British settlements of Malacca and Penang; and the protected states of Johore, Kedah, Kelantan, Negri Sembilan, Pahang, Perak, Perlis, Selangor and Trengganu. Under the High Commissioner, to whom power is delegated jointly by the Queen and the Malay rulers, there is a Federal Executive Council and a Federal Legislative Council.

British influence in the affairs of the nine native states is limited to defense and foreign affairs. The Sultan of each state has undertaken to promulgate a written Constitution for his state.

Singapore, comprising the island of Singapore and Christmas Island, a dependency, became a separate Crown colony on Apr. 1, 1946, when the former colony of the Straits Settlements was dissolved. Penang and Malacca were transferred to the Malayan Union, and the small island of Labuan to North Borneo. The Cocos or Keeling Islands were transferred to Australian control in 1951.

Under its 1955 Constitution, Singapore has a Legislative Assembly of 32, 25 of whom are directly elected, and a Council of Ministers responsible to the Assembly. The Governor's reserved powers include foreign affairs, defense and internal security.

The Commissioner General in Southeast Asia is charged with the coordination of administration in the Malayan Federation, Singapore, Sarawak, North Borneo and Brunei.

Since June, 1948, a considerable number of British and other troops have had to be stationed in the area to cope with Communist-led guerrillas. About 50 per cent of the population of the Federation is Malayan and 38 per cent Chinese; about 78 per cent of the population of Singapore is Chinese and 12 per cent Malayan.

Rubber and tin form the basis of the area's prosperity, and the Federation is the world's leading producer of tin ore. Over 60 per cent of the cultivable area is devoted to the growing of rubber.

The climate of Singapore, principal city of the area, is hot and humid, with practically no seasonal change; mean average temperature is 80°. The total yearly rainfall is about 95 inches.



## India (Republic)

(Member of Commonwealth of Nations)

Area: 1,269,640 square miles (excluding Kashmir, 82,258 square miles).

Population (census 1951): 356,829,485\* (Hindu, 85%; Moslem, 9.9%; Christian, 2.3%; Sikh, 1.7%; others [Jain, Buddhist, Zoroastrian, Jewish, etc.], 1.1%).

Density per square mile: 281.0†

President: Rajendra Prasad.

Prime Minister: Pandit Jawaharlal Nehru.

Principal cities (census 1951): Bombay, 2,839,270 (seaport; cotton and textiles); Calcutta, 2,548,677 (chief port); Madras, 1,416,056 (seaport); Hyderabad, 1,085,722 (trade center); Delhi, 914,973 (manufacturing); Ahmedabad, 788,333 (manufacturing); Bangalore, 778,977 (manufacturing); Kanpur (Cawnpore), 705,383 (textiles); New Delhi, 276,314 (capital).

Monetary unit: Rupee.

Principal languages: Hindi (official), English, Bengali, Assamese, Gujarati, Kannada, Kashmiri, Malayalam, Marathi, Oriya, Punjabi, Sanskrit, Tamil, Telugu, Urdu.

\* Excluding Kashmir (est. 1951: 4,400,000) and tribal areas of Assam (est. 1954: 560,000). † Excluding Kashmir. ‡ To be used for all official purposes until 1965.

**HISTORY.** The Republic of India is one of the largest, richest and most populous nations in the world. A sovereign republic within the Commonwealth of Nations, it contains most of pre-1947 India's industrial wealth and natural resources.

The Aryans or Hindus who invaded India between 2400 and 1500 B.C. from the northwest found a land already well civilized. Buddhism was founded in the 6th century B.C. and spread through northern India. The first exact date in Indian history is 327 B.C., when Alexander the Great invaded India. Meanwhile India continued to be divided into rival states.

In 1526, Mohammedan invaders founded the great Mogul empire, centered on Delhi, which lasted at least in name until 1857. Akbar the Great (1542-1605) strengthened this empire and became the ruler of a greater portion of India than had ever before acknowledged the suzerainty of one man. The long reign of his great-grandson, Aurangzeb (1658-1707) represents both the culmination of Mogul power and the beginning of its decay.

Vasco da Gama, the Portuguese explorer, visited India first in 1498, and for the next hundred years the Portuguese had a virtual monopoly on trade with the subcontinent. Meanwhile, the English founded the East India Company, which set up its first factory at Surat in 1612 and began expanding its influence, fighting against the Indian rulers and the French, Dutch and Portuguese traders simultaneously.

Bombay, taken from the Portuguese, became the seat of English rule in 1687. The defeat of French and Mohammedan armies

by Lord Clive in the decade ending in 1760 laid the foundation of the British Empire in India. From then until 1858, when the administration of India was formally transferred to the British Crown following the great mutiny of native troops in 1857, the East India Company was constantly occupied with the suppression of native uprisings and the extension of British rule.

After World War I, in which the Indian states sent more than 1,000,000 troops to fight beside the Allies, Indian nationalist unrest rose to new heights under the leadership of a little Hindu lawyer, Mohandas K. Gandhi, called Mahatma Gandhi. His tactics, of a politico-religious nature, called for non-violent revolts against British authority. He soon became the leading spirit of the all-India Congress party, which was the spearhead of Indian revolt against British rule. In 1919 the British gave added responsibility to Indian officials, and by an act passed in 1935 India was given a federal form of government and a measure of self-rule.

During the 1940's the policy of both the wartime coalition government of Britain and later the Labour government envisaged an unpartitioned India as a self-governing federal dominion including both British India and the native states. In 1942, with the Japanese pressing hard on the eastern borders of India, the British war Cabinet decided to send Sir Stafford Cripps to India to try to reach a political settlement with nationalist leaders. The mission failed. Shortly thereafter the Congress party took the position that the British must quit India. In August 1942, fearing mass civil disobedience, the government of India carried out widespread arrests of Congress leaders, including Gandhi.

Gandhi was released in May 1944, and other leaders later. Negotiations for a settlement were resumed and they proved fruitless until the British Labour government sent a mission in 1946 which obtained the agreement of the Congress party and Mohammed Ali Jinnah's Moslem League to a long-term plan for a Constitution based on three separate groups of provinces with a minimal center. However, agreement was not reached on an interim government and the Moslem League later reverted to its position of unconditional partition. Finally, in February 1947, the Labour government announced its determination to transfer power to "responsible Indian hands" by June 1948, even if a Constitution had not been worked out.

With the appointment at the same time of Lord Mountbatten as Governor General, events moved swiftly. By early June 1947, agreement was reached on the partitioning of India along religious lines (a plan previously opposed by the predominant Hindus and by Britain) and on the splitting

of the provinces of Bengal and the Punjab, which the Moslems had claimed in their entirety.

The Indian Independence Act, passed quickly by both houses of the British Parliament, received royal assent on July 18, 1947, and on Aug. 15 the Indian Empire, united under British rule for almost a century, passed into history.

Under the leadership of Pandit Jawaharlal Nehru, the new nation quickly took its place in world councils as a self-governing state. At home the nation pursued a policy of integration and reorganization designed to place effective power in the hands of the central government, which was faced at the outset by widespread communal rioting climaxed by the assassination of Gandhi, the great Hindu spiritual leader, on Jan. 30, 1948.

As a neutral nation India played an important part in international affairs in the 1950s.

**GOVERNMENT AND DEFENSE.** India is now a sovereign republic within the Commonwealth of Nations—a status approved by the other Commonwealth nations at London in April 1949, on the condition that India recognize the King as head of the Commonwealth. Under the Constitution adopted by the Constituent Assembly on Nov. 26, 1949, India has a parliamentary type of government. The bicameral Parliament is composed of the Council of States (216 members—204 chosen by constituent states and 12 by the President) and the House of the People (497 members—489 elected directly by popular vote for 5-year terms and 8 chosen by the President). The President is elected for a five-year term by an electoral

college composed of Parliament and the elected members of the state legislatures. The Cabinet, headed by the Prime Minister, administers the government and is collectively responsible to the House of the People. The constituent states have their own Governors and popularly elected legislatures.

In national elections held between Oct. 1951 and Feb. 1952, the Congress party won 363 of the 489 elective seats in the House of the People, Independents 36, Communists and allies 27, Socialists 12, others 51.

**Native States.** Most of the 560-odd native states and subdivisions of pre-1947 India acceded to the new nation, and the central government pursued a vigorous policy of integration. This took three forms: (1) merger into adjacent provinces, (2) conversion into centrally administered areas and (3) grouping into unions of states. The unions of states and Hyderabad, Mysore and Kashmir were assimilated to the level of provinces, with fully representative forms of government, subject to the power of the central government.

Proposals for substantial reorganization and amalgamation of the states were under consideration in 1956.

The status of the large princely state of Jammu and Kashmir on the northwest frontier is in dispute with Pakistan. It is 85 per cent Moslem, but its Hindu ruling prince acceded to India, which took over administration following invasion by Moslem troops in late 1947. The U. N. Security Council voted on April 21, 1948, to hold a plebiscite in the area, but, largely because of mutual distrust between India

## POLITICAL SUBDIVISIONS OF REPUBLIC OF INDIA, APRIL 1956

	Area, sq. mi. (approx.)	Population, census 1951		Area, sq. mi. (approx.)	Population, census 1951
<b>Provinces (Governors' States)</b>			<b>Travancore-Cochin</b>		
Andhra .....	67,000	21,282,000		9,144	9,280,425
Assam .....	85,012	9,043,707*	<b>Centrally Administered Areas</b>		
Bihar .....	70,330	40,225,947	<b>(Chief Commissioners' States)</b>		
Bombay .....	111,434	35,956,150	Ajmer .....	2,417	693,372
Madhya Pradesh .....	130,272	21,247,533	Bhopal .....	6,878	836,474
Madras .....	60,790	35,734,002	Coorg .....	1,586	229,405
Orissa .....	60,136	14,645,946	Delhi .....	578	1,744,072
Punjab .....	37,378	12,641,205	Himachal Pradesh .....	10,904	1,109,466
Uttar Pradesh .....	113,409	63,215,742	Kutch .....	16,724	567,606
West Bengal† .....	30,775	24,810,308	Manipur .....	8,628	577,635
<b>States and Unions of States</b>			Pondicherry .....	193	317,300
<b>(Rajpramukh States)</b>			Tripura .....	4,032	639,029
Hyderabad .....	82,169	18,655,108	Vindhya Pradesh .....	23,603	3,574,690
Madhya Bharat .....	46,478	7,954,154	<b>Chief Commissioner's Territory</b>		
Mysore .....	29,489	9,074,972	<b>Andaman and Nicobar Islands ..</b>		
Patiala and East Punjab (Pepsu) .....	10,078	3,493,685		3,215	30,971
Rajasthan .....	130,207	15,290,797	* Excluding tribal areas with estimated population of 560,000. † Excluding centrally administered Chandernagore (area 4 sq. mi., population, 1948 est., 44,800), transferred from France to India in May 1950.		
Saurashtra .....	21,451	4,137,359			



and Pakistan, arrangements have not been made for holding it.

**Defense.** The President has supreme command of the armed forces, and the Defense Minister is responsible to Parliament for the army, the navy and the air force, each under its own chief of staff and commander in chief.

The army has three territorial commands—southern, eastern and western—with headquarters at Poona, Ranchi and Delhi, respectively. In Dec. 1955, the navy had 2 cruisers, 6 destroyers, 4 frigates and escort craft and other smaller craft.

#### SOCIAL AND ECONOMIC CONDITIONS.

**Education.** Expansion and modernization of all branches of education is under way, with emphasis on technological training. About 83.4% of the population was illiterate in 1951. In 1950 there were 210,354 recognized primary schools with 18,384,207 pupils; 20,947 secondary schools, 5,229,204 pupils; 781 teachers' training colleges, 69,480 students; 855 institutions for higher learning (including 32 universities), 396,528 students. English is being replaced as the language of instruction by Indian languages.

**Agriculture.** More than 200,000,000 acres are under cultivation, but India probably will continue to be a food-deficit area for several years. Rice is the staple food crop; cotton, tea and jute are important cash crops. Production estimates for the crop year 1954-55 included rice, 36,894,000 metric tons (paddy); wheat, 7,999,000 tons; barley, 2,951,000 tons; tea, 292,300 tons; cottonseed, 1,528,000 tons; cotton (lint), 764,000 tons; jute (1955-56), 751,000 tons.

Livestock in 1951 included 42,584,000 buffalo, 130,298,000 other domestic cattle, 39,975,000 sheep, 47,121,000 goats and 4,173,000 pigs.

**Manufacturing.** The republic retained almost all of the industrial facilities of British India and is among the ten leading industrial nations of the world. Cotton and jute manufacturing are the two largest industrial activities, the former concentrated largely in Bombay and the latter in Calcutta. The provinces of West Bengal and Bombay are the two most important areas of industrial concentration, with Madras ranking third in importance. In 1955, cotton mills produced 745,200 metric tons of cotton yarn and 4,680,000,000 meters of cloth. Processing of sugar is of great importance; raw sugar production totaled 1,533,000 metric tons in the 1954-55 season plus 2,640,000 tons of cane gur for direct consumption. About 90 per cent of the world's supply of jute is processed in the republic. The iron and steel industry is being expanded; in 1955, 1,920,000 metric tons of pig iron and ferroalloys and 1,720,000 tons of raw steel were produced. Production of silk and woolen goods, vegetable

oils, coir yarn, paper, matches, salt, cement, leather and shoes, and heavy chemicals is also important.

**Communications.** Railway mileage totaled 34,119 in 1953, almost all of it under government control. The chief ports are Bombay and Calcutta. According to *Lloyd's Register*, the merchant marine had 221 steamers and motor ships (100 tons and over) aggregating 569,718 gross tons on June 30, 1955. Roads in 1953 totaled 255,000 miles.

**Trade.** India is primarily an importer of finished manufactured goods and an exporter of raw materials and semimanufactured products. Recent trade data are as follows (in millions of rupees):

	1953	1954	1955*
Exports	5,315	5,627	6,055
Imports	5,701	6,175	6,472

\* Provisional figures.

The leading customers in 1955 were Britain (27%), other sterling areas (25%) and the U. S. and Canada (18%). Leading suppliers included Britain (25%), other sterling area (22%) and the U. S. and Canada (15%). Leading exports in 1954 were tea (23%), jute and bagging (22%) and cotton manufactures. Main imports included petroleum and products, machinery, raw cotton and rice.

**Finance.** The 1955-56 budget provided for ordinary revenue of Rs.4,690,000,000 and expenditure of Rs.4,990,000,000. Capital expenditure was estimated at Rs.2,230,000,000. The estimated over-all deficit was Rs.3,400,000,000. The public debt on March 31, 1955, was Rs. 30,398,600,000, most of which was held internally.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The Indian republic contains a large part of the great Indo-Gangetic plain which extends from the Bay of Bengal on the east to the Afghan frontier and the Arabian Sea on the west. This plain is the richest and most densely settled part of the subcontinent, containing more than half the population. Another distinct natural region is the Deccan, a plateau of 2,000 to 3,000 feet elevation, occupying the southern or peninsular portion of the subcontinent. In several regions, the Deccan is quite mountainous.

Forming a part of the republic are several groups of islands—the Laccadives (14 islands) in the Arabian Sea; the Andamans (204 islands) and the Nicobars (19 islands) in the Bay of Bengal.

India's three great river systems, all rising in the Himalayas, have extensive deltas. The Ganges flows south and then east for 1,540 miles across the northern plain to the Bay of Bengal; part of its delta, which begins 220 miles from the sea, is within the republic. The Indus, starting in



Tibet, flows northwest for several hundred miles in Kashmir before turning southwest toward the Arabian Sea; it is important for irrigation in Pakistan. The Brahmaputra, also rising in Tibet, flows eastward first through India and then south into Pakistan and the Bay of Bengal.

**Minerals.** The republic has rich mineral resources. The most valuable mineral is coal, deposited throughout most of the nation; production in 1955 was approximately 38,830,000 metric tons. Manganese ore (about 1,344,000 tons in 1954) is mined in Madhya Pradesh, and gold in Orissa.

Assam and the Punjab produce oil. Other minerals include iron ore, monazite, diamonds, magnesite, uranium, zircon, silver, graphite, gypsum, tungsten ore and sapphires.

**Climate.** India's climate varies from temperate in the north to tropical in the south, where temperatures are almost constant the year around. During the November-February cool season, northern India has a climate like that of the Riviera. From March to June steadily rising temperatures reach a peak sometimes as high as 115°, and then comes the southwest monsoon. Rainfall is heavy, averaging 50 to 60 inches in Assam and reaching 500 inches in the Assamese Garo hills.

## Pakistan (Republic)

(Member of Commonwealth of Nations)

Area: 364,737 square miles.

Population (census 1951): 75,842,165

(Moslem, 86%; Hindu, 13%; others, 1%).

Density per square mile: 207.9.

President: Maj. Gen. Iskander Mirza (provisional).

Prime Minister: Chaudry Mohammed Ali.

Principal cities (census 1951): Karachi, 1,126,417 (capital); Lahore, 849,476

(capital, west Pakistan); Dacca, 276,033

(capital, east Pakistan); Hyderabad, 241,-

801 (trade and rail center); Rawalpindi,

237,219 (military center).

Monetary unit: Pakistani rupee.

Principal languages: Bengali (official),

Urdu (official), English\*, Hindi, Punjabi.

\* To be used for official purposes until 1976.

**HISTORY.** Pakistan, a self-governing member of the Commonwealth of Nations and one of the two successor states to British India, is the world's largest and most important Moslem state.

The history of Pakistan prior to 1947 is principally that of India. (See India.) Its creation was to a large extent attributable to Mohammed Ali Jinnah, who envisaged and pressed for the idea of a predominantly Moslem state carved out of the Moslem areas of British India. Upon the transfer of power on Aug. 15, 1947, Jinnah became the first Governor General; he died on Sept. 11, 1948, and was succeeded by Khwaja Nazimuddin. The latter became Prime Minister upon the assassination of

Liaquat Ali Khan, Oct. 16, 1951; he was replaced on Apr. 17, 1953, by Mohammed Ali. Chaudry Mohammed Ali succeeded him on Aug. 11, 1955. Pakistan was proclaimed a republic March 23, 1956, and Gov. Gen. Iskander Mirza was elected Provisional President.

**GOVERNMENT AND DEFENSE.** Under the Constitution adopted Feb. 29, 1956, Pakistan is a republic but continues its membership in the Commonwealth of Nations. The President is elected for 5 years by members of the central and provincial legislatures. The Prime Minister and his Cabinet are named by the President but are collectively responsible to the National Assembly. The Assembly has 300 members, divided equally between East and West Pakistan and directly elected for 5 years.

**Provinces.** Pakistan consists of two provinces—West and East Pakistan—approximately 1,000 miles apart, separated by the republic of India. The province of West Pakistan consists of Sind, Baluchistan, the former North-West Frontier Province, western Punjab, the princely state of Bahawalpur and a few other small native states. The province of East Pakistan consists of eastern Bengal and the Sylhet district of Assam. Pakistan contains large communal minorities of Hindus and Sikhs. Over half the nation's population is concentrated in East Pakistan, which contains only 15 per cent of the total area.

**Defense.** In the division of the British Indian Army, Pakistan received 20 regiments, which, with levies and contributions of native princes, made a total army strength of about 250,000. The Pakistan Navy in Dec. 1955 had a force of 4 destroyers, 2 sloops, 2 frigates, a number of mine sweepers and several smaller vessels. The air force has 1 transport and 2 fighter squadrons.

**SOCIAL AND ECONOMIC CONDITIONS.** Literacy was barely 13.2 per cent, according to the 1951 census. In 1955 there were 42,474 primary schools with 3,200,000 pupils, 5,118 secondary schools with 1,150,000 pupils and 6 universities.

Pakistan, poor in industry and natural resources, is mainly an agricultural nation. Upwards of 45,000,000 acres are under cultivation, almost half of which are irrigated, largely in Sind and west Punjab in western Pakistan. The Punjab contains important wheat-growing areas, and eastern Pakistan is rich in jute, rice and tea. Production estimates for the crop year 1954-55 included wheat, 3,742,000 metric tons; rice, 12,810,000 tons (paddy); maize, 447,000 tons; barley, 158,000 tons; tea, 24,800 tons; (1955-56) cotton (lint), 282,000 tons; jute, 1,015,000 tons. In 1951-52 there were 6,570,000 sheep, 4,980,000 buffalo, 24,069,000 cattle, 494,000 horses and (1952) 477,000 camels.

Pakistan is an exporter of agricultural products and an importer of manufactured commodities. Recent statistics are as follows (in millions of Pakistani rupees):

	1953	1954	1955
Exports	1,453	1,187	1,505
Imports	1,154	1,107	1,085

Chief exports in 1955 were jute (45%), raw cotton (27%), tea, wool and jute manufactures. Leading customers were Britain (15%), India (13%), Japan (12%) and the U. S. (8%); leading suppliers, Britain (24%), Japan (14%) and the U. S. (11%). Leading imports were machinery, petroleum and products, iron and steel and products, vehicles and cotton piece goods.

Development of a unified nation is retarded by the fact that communication between east and west Pakistan is possible only through a thousand miles of Indian territory or by a long sea voyage. Railway mileage (1954) totaled 7,100.

Western Pakistan has an estimated road mileage of 46,000, about half of which is suitable for motor traffic. Eastern Pakistan has few roads for motor vehicles, but there are about 2,800 miles of waterways navigable by small steamers. On June 30, 1955, the merchant marine had 48 vessels (100 tons and over) aggregating 152,125 gross tons. Karachi, chief port, is the distribution center for north India and has the most important airport on the subcontinent. Chittagong is being developed as a port for eastern Pakistan.

Since partition, Pakistan has made much progress toward industrialization. The most important manufacturing area is in the vicinity of Lahore in the Punjab. Industries include cotton ginning, spinning and weaving, jute manufacturing, sugar refining, cement making, flour milling, railway and engineering workshops and petroleum refining.

The budget for the fiscal year 1956-57 estimated revenue at Rs. 1,310,000,000 and ordinary expenditure at Rs. 1,304,000,000; capital expenditure was placed at Rs. 1,274,000,000, to be financed by loans and foreign aid.

**NATURAL FEATURES AND RESOURCES;**  
**CLIMATE.** Almost all of Sind and the west Punjab are a continuation of north-central plains leading up to rugged mountains in the north and west which traverse Baluchistan and the North-West Frontier Province. Eastern Pakistan is a low-lying, flat country with elevation averaging not more than 600 feet above sea level.

Mineral resources are limited. Production in 1955 included petroleum, 20,700,000 bbl.; coal and lignite, 531,600 metric tons; (1954) chromite, 22,300 tons; gypsum,

31,700 tons. Vast quantities of natural gas were discovered at Sui, Baluchistan, in 1952.

Western Pakistan has a brisk, cool season between November and March, with average mean temperature of about 60°, and an extremely warm period between April and November, with an average mean of 85°. Rainfall averages about 10 inches a year, of which Sind may receive as little as 6.3 in. Eastern Pakistan is within the range of the summer monsoon, with average annual rainfall of 85 in. The average maximum temperature varies between 75° and 100° April to June; the minimum, between 45° and 60° November to January.

## OCEANIA

### Australia, Commonwealth of (Member of Commonwealth of Nations)

Area: 2,974,581 square miles.

Population (est. June 30, 1955): 9,201,691 (excluding full-blooded aborigines, estimated at 50,000).

Density per square mile: 3.2.

Ruler: Queen Elizabeth II.

Governor General: Field Marshal Sir William Slim.

Prime Minister: Robert Gordon Menzies.

Principal cities (est. June 30, 1955): Sydney, 1,897,710 (seaport, wool market); Melbourne, 1,595,000 (seaport, wool, wheat); Brisbane, 515,000 (seaport, industrial center); Adelaide, 506,000 (seaport); Perth, 359,000 (western seaport); Canberra, 30,390 (capital).

Monetary unit: Australian pound (£A).

Language: English.

Religions (census 1947): Anglican, 39.0%; Roman Catholic, 20.7%; Presbyterian, 9.8%; Methodist, 11.5%; other Christians, 7.1%; others, 11.9%.

**HISTORY.** Australia was the last continent to be discovered. The first Europeans to land were the Dutch, who sailed into the Gulf of Carpentaria in March, 1606. Later in the same year, Luis Vas de Torres, a Spaniard, sailed through the strait subsequently named for him, and may have touched at several points on the north coast. In 1642 Abel Tasman (for whom Tasmania was named) sailed from west to east along the southern shore and proved that Australia was not a part of the Antarctic continent. The continent was called New Holland until about 1850.

In 1770 Captain James Cook, after visiting New Zealand, sailed to the east coast of New Holland and landed south of the present city of Sydney. His account of the country led to its being claimed and settled by Great Britain.

The first settlement, made in 1788 at Botany Bay, was founded as a penal station for criminals from England. Transportation of criminals was virtually suspended in 1839, and Australia had comparatively few white settlers until gold was discov-



ered in Victoria in 1851, after which immigrants poured in. By 1860 all the states (then separate colonies) except Western Australia had been granted responsible government.

On January 1, 1901, the six Australian states united to form the Commonwealth of Australia. The Commonwealth supported Great Britain wholeheartedly in World War I, sending 329,883 troops abroad, all volunteers. Australia again declared war on Germany September 3, 1939, and became a vast base for U. S. troops. Gen. Douglas MacArthur set up his headquarters there on March 17, 1942.

In the general elections held August 21, 1943, Prime Minister John Curtin's Labour government was confirmed in office. Curtin died July 5, 1945, and was succeeded by Joseph B. Chifley, also of the Labour party. The Labour government was defeated by the Liberal-Country-party coalition in general elections held Dec. 10, 1949, and Robert Gordon Menzies, the Liberal leader, became Prime Minister on Dec. 15. Elections held April 28, 1951, May 29, 1954, and Dec. 10, 1955, were again won by the coalition, although by narrower margins.

Australia was visited in 1954 by Queen Elizabeth II and the Duke of Edinburgh. **GOVERNMENT AND DEFENSE.** Australia, a self-governing member of the Commonwealth of Nations, is a union of 6 states (New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania) and 2 territories (Northern Territory, Australian Capital Territory).

Legislative power is vested in a Parliament of 2 houses—the Senate with 60 members (10 for each state), the House of Representatives with 122 members (plus 2 without vote who represent the territories) elected on a population basis.

Executive power nominally is exercised by the Queen, through a Governor General, who is appointed by her. Actually, however, the Commonwealth is administered by the Prime Minister and the Cabinet members, who are responsible to the House of Representatives and must enjoy its confidence. The House of Representatives continues its sessions for three years from the date of its first meeting, unless sooner dissolved. Senators are chosen for six years, but the Senate may be dissolved in the event of prolonged disagreement with the House. The party alignment in the House after the elections of Dec. 10, 1955, was as follows: Liberal-Country-party coalition 75; Labour 47 (and 2 non-voting members).

Each of the states is headed by a Governor who is appointed by the Queen and is advised by the Prime Minister and his Cabinet; the latter actually administer the government. As in the U. S., the state gov-

ernments retain the powers not specifically delegated to the federal government. The Northern Territory is administered by the federal government.

Federal judicial power is vested in a Federal Supreme Court of 7 justices, appointed by the Governor General in Council. Each state has its own judicial system.

Compulsory military service was reintroduced in 1951. The strength of the regular forces on June 30, 1954, was: army, 24,414; navy, 13,857; air force, 14,882. In Dec. 1955, the navy had 2 light aircraft carriers, 1 cruiser, 6 destroyers, 17 frigates and escort vessels and numerous smaller craft. Army navy and air units were sent to Korea. During World War II, 350,000 men served overseas.

**SOCIAL AND ECONOMIC CONDITIONS:** Normal primary education is provided free by the states. In 1952 there were 7,620 state primary and secondary schools, with average attendance of 1,087,990, and 1,926 private schools, with average attendance of 347,831. The 10 universities had a full-time enrollment of 16,976 in 1954. Illiteracy is almost unknown among the European population.

Australia is the world's chief producer of wool, and sheep farming is the Commonwealth's most important single industry. About 55 per cent of Australia's total area is suitable (mining excepted) only for pastoral pursuits. On March 31, 1955, there were 130,849,000 sheep, 15,836,000 cattle, 1,297,000 hogs and 803,000 horses. The production of wool in 1954-55 was 573,123 long tons (greasy); butter, 191,467 metric tons; cheese, 45,106 tons. Production of meat was 1,191,501 tons.

The most important crop is wheat; the areas of heaviest production are in South Australia and New South Wales, but production in Western Australia is rapidly increasing.

#### CROP ACREAGE AND PRODUCTION

	(in thousands)			
	Acres		Long tons	
	1953-54	1954-55	1953-54	1954-55
Wheat	10,670	10,673	5,303	4,520
Oats	2,150	2,574	589	586
Barley	1,800	1,691	921	656
Maize	155	170	127	127

Sugar and cotton are grown in Queensland and New South Wales, tobacco in northeast Victoria, and vines chiefly in South Australia and Victoria.

New South Wales is the leading industrial state. Power for industry is derived almost entirely from coal. Steel production was 2,196,547 long tons in 1955; pig iron 1,794,179 tons; cement, 1,959,817 tons; cotton yarn, 40,012,000 lb.; wool yarn, 42,161,539 lb. Production of motor vehicles totaled 55,000 in 1954.



Trade statistics for three years (in millions of Australian pounds) are as follows:

	1952-53	1953-54	1954-55
Exports	871.3	828.3	774.2
Imports	514.1	681.5	843.7

In 1954-55 the leading customers were Britain (37%), France (8%), Japan (8%) and the U. S. (7%); leading suppliers, Britain (45%), the U. S. (12%), western Germany (4%) and Arabian states (4%). Chief exports were wool (45%), meat (8%), wheat (6%) and fruit (4%). Leading imports included petroleum and products, motor vehicles, iron and steel and cotton piece goods.

The principal ports are Sydney, Melbourne and Adelaide. Railway mileage in 1954 totaled 27,000; roads, over 500,000. Civil aviation is under Commonwealth control. The merchant marine had 374 ships of 100 tons and more, aggregating 12,430 gross tons, on June 30, 1955. On Jan. 1, 1955, there were 1,530,680 telephones, (March 31, 1955) 2,031,110 radio receiving licenses and in Dec. 1955, 1,419,332 automobiles and 665,608 commercial vehicles.

Recent public finance data on consolidated account are as follows (in millions of Australian pounds):

	1953-54	1954-55*	1955-56*
Revenue	1,022.8	1,067.4	1,123.8
Expenditure	1,035.2	1,067.4	1,123.6

\* Budget estimate.

The public debt (federal and state) on Dec. 31, 1955, was £A3,896,774,236 (federal only: £A2,005,140,349).

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Australia is approximately equal in area to the United States and is more than three-fourths the size of Europe.

Along the east coast, ranges of mountains run from north to south, reaching their highest point in Mt. Kosciuszko (7,352 ft.). The western half of the continent is occupied by a desert plateau which rises into barren, rolling hills near the west coast. It includes the Great Victoria Desert, to the south, and the Great Sandy Desert to the north. The island of Tasmania (26,215 sq. mi.) lies off the southeastern coast.

Australia possesses considerable mineral resources. The value of mineral output in 1954 was £A149,300,000. Most important is gold (1955 output: 1,049,000 ounces), followed by coal, mined near Sydney, Brisbane and in eastern Tasmania (1955 output: 19,291,000 long tons, plus 10,112,000 tons of brown coal). The Broken Hill mines in New South Wales are one of the most valuable silver-lead-zinc areas in the world. Silver production in 1955 was about 14,081,000 oz.; lead, 293,000 long tons; zinc, 256,000 tons. Other important minerals in 1955 included tin (2,000 tons),

copper (44,000 tons), iron ore (2,347,000 tons) and uranium. Petroleum was discovered in Western Australia in 1953.

Forest products include timber (rough sawn), eucalyptus oil, sandalwood oil, tan bark and yacca gum. Sea products include bêche-de-mer, oysters, pearls, pearl shell, tortoise shell and agar-agar.

**Climate.** The northern third of the country lies within the torrid zone and the remainder within the south temperate zone. The coolest portion of the mainland (Victoria) is not unlike Spain and south Italy. The average temperature for Australia as a whole is 70°, and the northern coastal areas average 82°. Only in the center of the continent does the annual range of temperature exceed 30°. Large areas of the continent receive less than 10 inches of rain. The eastern highlands and Victoria are the best-watered regions.

Norfolk Island, under Commonwealth administration since 1914, lies about 800 miles east of New South Wales. It enjoys a delightful subtropical climate. Citrus fruits, bananas and coffee are grown.

**PAPUA AND NEW GUINEA, TERRITORY OF—Status:** Australian territory and U. N. trust territory.

Administrator: D. M. Cleland.

Capital: Port Moresby (population 13,800).

Chief exports: copra, rubber, gold.

Agricultural products: coconuts, rubber, copra, cacao.

Minerals: gold, silver, platinum.

Effective July 1, 1949, the Australian territory of Papua and the U. N. trust territory of New Guinea were joined in an administrative union by act of the Australian Parliament. Provision is made for an executive and a legislative council.

Papua, comprising the southeastern part of the island of New Guinea, and the islands of the D'Entrecasteaux, Louisiade and nearby groups, was annexed by Queensland in 1883 and by the British Crown in 1888. It came under the control of the Australian Commonwealth in 1901 and became the Territory of Papua in 1906. Japan invaded Papua in early 1942, but in Dec. 1942, Australian control was restored.

On June 30, 1952, there were 4,242 non-natives in the territory.

The U. N. trust territory of New Guinea, comprising the northern section of eastern New Guinea (93,000 sq. mi.), was mandated in 1920 by the League of Nations to the government of the Commonwealth of Australia, together with the Bismarck Archipelago (New Britain, New Ireland and adjacent islands), the Admiralty Islands with several outlying groups, and the northern Solomon Islands (Bougainville and Buka). It was placed under United Nations trusteeship Dec. 13, 1946, with Australia as the administering power. Jap-

anese troops occupied much of the territory in 1942-45. On June 30, 1954, there were 8,020 Europeans and 3,422 other nonnatives in the territory.

#### **FIJI—Status: Colony.**

Governor: Sir Ronald H. Garvey.

Capital: Suva (population 32,000).

Foreign trade (1955): exports, £12,542,064 (38% to Britain); imports, £14,373,951 (37% from Britain). Chief exports: sugar (49%), coconut oil (18%), gold (8%).

Agricultural products (exports 1955): sugar (156,160 long tons), coconut oil (18,586 tons), copra, bananas, pineapples. Minerals: gold (1955: 73,989 oz.).

Fiji colony consists of an archipelago of from 200 to 250 islands in the South Pacific Ocean about 1,740 miles northeast of Sydney, Australia. The larger islands, including Viti Levu (4,011 sq. mi.) and Vanua Levu (2,137 sq. mi.) are mountainous and of volcanic origin. The archipelago was ceded to Great Britain by the native ruler in 1874.

The population of the archipelago in Dec. 1955 included 9,391 Europeans, 146,842 Fijians and 166,262 Indians. Importation of the latter to work the sugar plantations has led to important social and economic changes. There has been almost no intermarriage between Fijians and Indians, and considerable ill feeling has developed between them.

During World War II, the archipelago was an important air and naval station on the route from the United States west coast and Hawaii to Australia and New Zealand.

Fiji has a pleasant climate, with the temperature seldom leaving the 60°-90° range; rainfall is heavy in the southeastern three quarters of the archipelago, averaging 10-12 ft. annually, but is almost nil in the northwestern quarter.

#### **TONGA (FRIENDLY ISLANDS)—Status: Protected state.**

Ruler: Queen Salote Tupou.

Foreign trade (1955): exports, £A1,569,485; imports, £A1,044,418. Chief export: copra.

This native Polynesian kingdom in the Pacific came under British protection through the Anglo-German agreement of November 14, 1899. The native Queen is advised by a British Agent; the 21-member native Legislative Council is partly elected and partly nominated. The only important products are copra and bananas.

#### **PITCAIRN ISLAND—Status: Colony.**

Located in the South Pacific, about midway between Australia and South America, Pitcairn has an area of 2 square miles. It was settled in 1790 by British mutineers from the ship *Bounty*, commanded by Capt. Bligh. Overpopulation forced removal of the settlement to Norfolk Island in

1856, but about 40 soon returned. The island is administered by the Governor of Fiji through an elected council headed by a Chief Magistrate. The population in 1955 was about 140.

#### **NAURU—Status: U. N. trust territory.**

This small island (8 sq. mi.), an important source of phosphate (exports about 1,000,000 tons annually) was annexed by Germany in 1888 and was placed under joint Australian, New Zealand and British mandate after World War I. In 1947 it was placed under U. N. trusteeship, with the same three administering powers. It lies approximately 2,215 miles northeast of Sydney.

## **New Zealand**

(Member of Commonwealth of Nations)

Area: 103,740 square miles (including outlying islands).

Population (census, Apr. 1956\*): 2,172,350 (1951: European, 93.3%; Maori and half-caste, 5.9%; others, .8%).

Density per square mile: 20.9.

Ruler: Queen Elizabeth II.

Governor General: Lt. Gen. Sir William Loughby Norrie.

Prime Minister: Sidney G. Holland.

Principal cities (census, Apr. 1956): Auckland (greater), 380,412 (seaport and naval base); Christchurch, 193,182 (cereals stock raising); Wellington, 138,035 (capital); Dunedin City, 99,326 (textiles).

Monetary unit: New Zealand pound (NZ).

Language: English.

Religions (census 1951): Church of England, 37.5%; Presbyterian, 22.3%; Roman Catholic, 13.6%; Methodist, 8.1%; Baptist, 1.6%; others, 16.9%.

\* Provisional figures.

**HISTORY.** New Zealand, about 1,250 miles east of Australia, consists of two main islands and a number of smaller outlying islands so scattered that they range from the tropical to the antarctic. The islands which have approximately the area of Italy, were discovered and named New Zealand in 1642 by Abel Tasman, a Dutch navigator. Captain James Cook explored them in 1769 and after him came many other sailors, sealers, whalers and traders. English missionaries landed in 1814 but made slow progress. On Jan. 22, 1840, the head off a possible French move to claim New Zealand, Britain formally annexed it.

New Zealand was granted self-government in 1852, a full parliamentary system and ministries in 1856 and dominion status on Sept. 26, 1907. Meanwhile from 1860 to 1871 there was fierce intermittent fighting with the native Maoris. Gold was first discovered in 1853.

New Zealand's Labour party came to power in 1935 for the first time, with Michael J. Savage as Prime Minister. The

party began a program of liberal economic and social measures and it was again successful in the 1938 elections.

In World War II, New Zealand troops fought in Egypt, Greece, Crete, North Africa, Sicily and Italy, and the islands served as a major base for U. S. troops in the Pacific war.

After 14 years in power, the Labour party was defeated at the general election of Nov. 19, 1949, and the National party took office with Sidney G. Holland as Prime Minister.

**GOVERNMENT AND DEFENSE.** New Zealand is a self-governing member of the Commonwealth of Nations. The Queen is represented by a Governor General named by the Queen after consulting with the New Zealand government. Legislative power is vested in the eighty-member House of Representatives. The former upper house (Legislative Council) was abolished effective Jan. 1, 1951. The House elected on Nov. 13, 1954, had 45 National party and 35 Labour party members.

Military service was voluntary until July 2, 1940, when compulsory service was instituted. Service outside New Zealand, hitherto voluntary, also became obligatory during World War II. At full mobilization, New Zealand had 157,000 men in the armed forces and 124,000 in the Home Guard. Almost one-third of the whole male population of military age served overseas. The peacetime force is stabilized at 11,000 men. Naval forces include 2 cruisers, 6 escort destroyers and a number of mine sweepers.

Navy and volunteer army forces were dispatched to Korea in 1950, and compulsory service was readopted. A mutual defense pact with the U. S. was signed Sept. 1951.

**SOCIAL AND ECONOMIC CONDITIONS.** State education is free and compulsory between the ages of 7 and 15. More than half the Maoris attend the regular public schools; the remainder attend missionary and native village schools. In Dec. 1953, there were 2,209 primary schools with 3,126 students and 285 secondary and technical schools with 66,996 students. University students numbered 10,326. About 10 per cent of the national budget is expended on education.

Primarily a grazing country, New Zealand is one of the world's largest exporters of mutton, lamb, wool, butter and cheese. In 1955, livestock included 39,117,300 sheep, 5,886,777 cattle and 681,359 hogs. Wool production for 1954-55 was 455,000,000 lbs. (greasy basis). Outside of grass, the chief crop is wheat (4,113,444 bushels in 1954-55). Other crops are oats, barley, potatoes, onions, tobacco, fruits and vegetables. Butter production in 1954-55 was 36,400 long tons; cheese, 101,800 tons; meat, 630,200 tons.

The chief industries of New Zealand are freezing of meat and making of butter, cheese and condensed milk. Others of major importance are electricity generation, saw milling and clothing manufacture.

Trade statistics for three years (in millions of New Zealand pounds):

	1953	1954	1955*
Exports	235.9	244.5	258.9
Imports	180.0	213.2	251.2

\* Provisional.

Leading customers in 1955 were Britain (66%), France (6%), the U. S. (6%) and western Germany (5%); leading suppliers, Britain (55%), Australia (12%), the U. S. (9%) and Malaya (2%). Leading exports were wool (36%), dairy products (27%) and meat (26%).

According to *Lloyd's Register*, the merchant marine had 160 ships (100 tons and over) aggregating 239,879 gross tons on June 30, 1955. Government-owned railway mileage in 1954 was 3,535; highway mileage in 1953 was 12,835.

Recent government financial data on ordinary account are as follows (in millions of New Zealand pounds):

	1953-54	1954-55	1955-56
Revenue	182.3	191.2	197.4
Expenditure	180.5	184.4	193.3

The public debt on March 31, 1955, was £NZ735,201,244, excluding £NZ24,100,200 on which interest payments had been suspended since 1931 by agreement with the British government.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** New Zealand's two main components are North Island and South Island, separated by Cook Strait, which varies from sixteen to 190 miles in width. North Island (44,281 sq. mi.) is 515 miles long and volcanic in its south central part. It contains many hot springs and beautiful geysers.

South Island (58,093 sq. mi.) has the Southern Alps along its west coast, with Mt. Cook (12,349 feet) the highest point in New Zealand.

Principal minerals are coal (1955: 2,544,000 long tons), gold (1954: 41,713 ounces) and silver (1954: 33,049 ounces). Other minerals of importance include tungsten, pumice, silica sand, asbestos, scheelite, iron ore and phosphate. About 30 per cent of the total area is forested; 625,789,000 board feet of lumber were cut in 1955-56.

Flounder, snapper and tarakihi account for 75% of New Zealand's fishery industry. There also are extensive oyster beds.

Numerous rushing streams give New Zealand a great volume of hydroelectric power. About 95 per cent of the population has access to power. Installed capacity (1950) was 727,000 kw.; production (1955), 4,032,000,000 kwh.



The ocean tempers New Zealand's climate, which otherwise might have great variation. The range of mean temperatures is small (at Auckland, 66.3° in January, 51.2° in July; at Wellington, 60.9° in January, 47.2° in July). Rainfall is moderate except on the western slope of the Southern Alps; it averages 45.3 inches annually at Auckland and 47.5 inches at Wellington.

**DEPENDENCIES.** The Auckland Islands (234 sq. mi.) and Campbell Island (44 sq. mi.) are the principal outlying islands, which have a total area of 324 square miles. They are included within the geographical boundaries of New Zealand as proclaimed in 1847. The Aucklands and Campbell are uninhabited. Six hundred miles north of the Aucklands are the volcanic Kermadec Islands (13 sq. mi.), annexed in 1887. The Union (or Tokelau) Islands (4 sq. mi.), transferred in 1925 from the Gilbert and Ellice Islands colony, were declared part of New Zealand effective Jan. 1, 1949.

In Polynesia a number of uninhabited islands were brought under New Zealand's control in 1901. Rarotonga and Mangaia in the Cook group total 84 square miles. Niue (or Savage Island) (115 sq. mi.) is the largest island outside the Cook group. New Zealand also administers the Ross Dependency, an antarctic region claimed by Great Britain in 1923.

**WESTERN SAMOA—Status:** U. N. trust territory.

High commissioner: G. R. Powles.

Capital: Apia (population 16,000).

Foreign trade (1955): exports, £2,511,899 (56% to the U. K.); imports, £1,894,542 (31% from New Zealand). Chief exports: copra (46%), cacao (35%), bananas.

Principal products (exports 1955): copra (17,178 long tons), cacao (3,118 tons), bananas, tropical fruits.

The former German Samoan Islands were occupied by New Zealand troops in the opening weeks of World War I and were mandated to New Zealand by the League of Nations in 1920 as the Territory of Western Samoa. They came under U. N. trusteeship in 1947, with New Zealand continuing as the administering authority. The High Commissioner is assisted by an Executive Council, a Legislative Assembly which has a Samoan majority and a consultative Native Council. There are 9 islands, of which the largest and most populous are Savaii (703 sq. mi.) and Upolu (430 sq. mi.). They are largely mountainous but fertile. The inhabitants are Polynesian Christians. Europeans numbered 450 in 1951.

## PACIFIC ISLANDS (British)

High Commissioner in Western Pacific: Sir Robert Stanley.

Island groups in the Pacific administered by the British High Commissioner in the

Western Pacific include (1) Gilbert and Ellice Islands, (2) British Solomon Islands and (3) New Hebrides Condominium (see French Overseas Territories). The High Commissioner has headquarters at Honiara, Solomon Islands.

## GILBERT AND ELLICE ISLANDS—Status: Colony.

The islands in these groups (including the Gilbert group; the Ellice group; Ocean Island [the seat of administration], Fanning, Washington and Christmas Islands and the Phoenix group) were proclaimed a British protectorate in 1892 and annexed as a colony in 1915. The most important product is high-grade phosphate.

Ownership of Canton and Enderbury Islands in the Phoenix group was long in dispute between Great Britain and the United States until 1939, when an agreement for "use in common" was reached by the two governments. Several of the Gilbert Islands were occupied by Japanese forces in World War II, and Tarawa was the scene of one of the fiercest battles: U. S. Marine Corps history in Nov. 1943.

## SOLOMON ISLANDS—Status: Protectorate.

This British protectorate, lying east of New Guinea, includes the islands of Guadalcanal, Malaita, San Cristobal, New Georgia, Santa Isabel, Choiseul and numerous smaller islands. Bougainville, one of the group, is under Australian mandate. The islands, which came under British protection late in the 19th century, were the scene of several important U. S. naval and military victories during World War I. There are no native states, and administration is carried on by the High Commissioner assisted by a nominated Advisory Council. The most important products are copra and kauri wood. The population is predominantly Melanesian; European numbered 376 in 1950.

## Bulgaria (People's Republic)

(Narodna Republika Blgariya)

Area: 42,796 square miles.

Population (est. 1954): 7,350,000 (95% Bulgarian, 91%; Turkish, 6%; Gypsy, 2%; others, 1%).

Density per square mile: 171.7.

Chairman of Presidium: Georgi Damjanov.

Premier: Anton Yugov.

Principal cities (est. 1953): Sofia, 600,000 (capital, railroad center); Plovdiv, 150,000 (commercial center); (cens. 1946) Stalin (Varna), 77,792 (Black Sea port); Ruschuk, 53,420 (chief Danube port); Burgas, 43,684 (Black Sea port).

Monetary unit: Lev.

Languages: Bulgarian, Turkish.

Religions: Greek Orthodox, 84.4%; Mohammedan, 13.5%; Jewish, .8%; Roman Catholic, .8%; others, .5%.

**HISTORY.** Bulgaria, with a strife-ridden political past, is an agrarian country about the size of Virginia. It sided timidly with Germany in World Wars I and II, hoping to win territory. It lost in both wars.

The first Bulgarians, a tribe of wild horsemen akin to the Huns, crossed the Danube from the north in A.D. 679, and took the province of Moesia from the Roman Empire. They adopted a Slav dialect and Slavic customs and twice conquered most of the Balkan peninsula between 893 and 1280. After the Serbs subjected their kingdom in 1330, the Bulgars gradually fell prey to the Turks, and from 1396 to 1878, Bulgaria was a Turkish province. In 1878, after the Turks had ruthlessly suppressed a Bulgar revolt, Russia forced Turkey to give the country its independence; but the European powers, fearing that Bulgaria might become a Russian dependency, intervened. By the Treaty of Berlin (July, 1878), Bulgaria became autonomous under Turkish sovereignty, with the province of Eastern Rumelia under a Christian Governor.

In 1887, Prince Ferdinand of Saxe-Coburg-Gotha was elected ruler; on Oct. 10, 1908, he declared Bulgaria (and Rumelia) an independent kingdom.

In the First Balkan War (1912-13), Bulgaria joined its neighbor states and defeated Turkey; then it bickered with Serbia and Greece over division of Macedonia and was defeated by them in the Second Balkan War, which lasted one month.

Still coveting Macedonia, Bulgaria joined Germany in World War I and lost. On Sept. 3, 1918, Tsar Ferdinand abdicated in favor of his son, who became Tsar Boris III. The Treaty of Neuilly the next year harmed Bulgaria, reduced it to its 1878 size, and levied a heavy indemnity. Internal disorder, underground intrigue and Agrarian-Communist agitation marked the next ten years.

Boris assumed dictatorial powers in 1934. When Hitler awarded his nation Southern Dobruja, taken from Rumania in 1940, the weak but land-hungry Boris joined the Nazis in war the next year and occupied parts of Yugoslavia and Greece. Later, with the fortunes of war swinging inexorably against them, the Germans tried to force Boris to send his troops against the Russians. Boris resisted and died under mysterious circumstances on Aug. 28, 1943.

Simeon II, infant son of Boris, became nominal ruler under a regency. Three days after Russia declared war on Bulgaria on Sept. 5, 1944, Bulgaria declared war on Germany. Russian troops streamed in the next day, and under an informal armistice coalition "Fatherland Front" Cabinet was set up under Kimon Georgiev.

The Fatherland Front regime represented

the Communist, Zveno, Agrarian and Social Democratic parties, but real power was in the hands of the Communists, who had active Soviet support and were ably led by Georgi Dimitrov, veteran party leader and former Secretary-General of the Comintern. This government initiated extensive social and economic reforms, instituted a ruthless purge of war criminals and suppressed all political groups which failed to subscribe to its policies.

After a plebiscite held Sept. 8, 1946, which resulted in overthrow of the monarchy, and the Oct. 27 elections, the Communists quickly moved to take over the government officially and to reduce the political opposition to complete impotence. Under the peace treaty which took effect Sept. 15, 1947, after World War II, Bulgaria's boundaries are those which existed Jan. 1, 1941, thus including Southern Dobruja. Bulgaria was to pay reparations in the amount of \$45,000,000 to Greece and \$25,000,000 to Yugoslavia and was to make compensation for damage to Allied property in Bulgaria at the rate of 75% of the cost of replacement.

The United States broke diplomatic relations with Bulgaria on Feb. 21, 1950. Bulgaria was admitted to the U. N. in 1955. **GOVERNMENT AND DEFENSE.** The Constitution of 1947, modeled after the U.S.S.R.'s, provides that the unicameral National Assembly is "the supreme organ of the state." The Assembly elects a 15-member Presidium, the President of which is the nominal Chief of State. Governmental administration is carried on by the Premier and his Cabinet, who are responsible to the Assembly. On Feb. 4, 1948, the Communist-dominated Fatherland Front was declared the only official party.

The 1947 treaty of peace fixed the strength of the armed forces as follows: army 55,000; anti-aircraft artillery 1,800; navy 3,500; and air force 5,200 men and 90 aircraft, none of them bombers. The army was purged of all anti-Communist officers late in 1946 and has been reorganized along Soviet lines. Notwithstanding the treaty provisions, the army had an estimated strength of 200,000 by 1954. A reduction of 18,000 was announced in 1955. **SOCIAL AND ECONOMIC CONDITIONS.** Elementary education is compulsory and free between 7 and 15; in 1946, 23% of the total population was illiterate. Schools in 1953 included 6,250 elementary, 250 secondary and 230 vocational training schools, with total enrollment of 1,120,000. There were 20 institutions of higher learning with 31,500 students.

Most of the population is Greek Orthodox. Clergy of all faiths are paid by the state. The national language, Bulgarian, is closely related to Russian; both employ the Cyrillic alphabet.



Bulgaria is predominantly agrarian, with 80 per cent of the population engaged in agriculture. Because of the mountainous character of the country, however, only about 43 per cent of the land is tilled or used for pasture. Most landholdings are small, and primitive methods of cultivation predominate. Collectivization is well-advanced. More than half the cultivated area is devoted to cereals, including wheat, corn, barley, oats and rye. Other crops are tobacco, alfalfa, cotton, flax, potatoes and sugar. There are extensive vineyards in the southern valleys.

Industries are of minor importance and with few exceptions—preparation of tobacco leaf, wines and liquors, fertilizers, distillation of attar of roses, and flour milling—are confined to domestic markets. All industries of any importance have been nationalized. Both the first (1948-53) and the second (1953-57) five-year plans emphasized the development of heavy industry.

Foreign trade necessarily consists of the exchange of agricultural products for cheap manufactures. Statistics, in billions of leva, are as follows:

	1946	1948	1950
Exports	14.94	34.10	51.62
Imports	17.51	35.20	38.57

Leading customers in 1950 were the U.S.S.R. (45%) and Czechoslovakia, Hungary, Rumania and Poland (31%). Leading suppliers were the U.S.S.R. (67%) and the four above-named satellites (31%). Tobacco was the principal export.

Although the Danube is navigable along the northern border, only a comparatively small percentage of prewar Danube ship tonnage was Bulgarian. Railroad mileage, all nationalized, totaled 2,231 in 1952; highway mileage was 13,870.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Two mountain ranges and two great valleys mark Bulgaria's topography. The Balkan belt crosses the center of the country, almost due east-west, rising to a height of 7,800 feet. The Rhodope range breaks off from the Balkans in the west, curves and then straightens out to run nearly parallel along the southern border. Between the two ranges is the valley of the Maritsa, Bulgaria's principal river. Between the Balkan range and the Danube, which forms most of the northern boundary with Rumania, is the Danubian tableland, traversed by several short rivers. Southern Dobruja, a fertile region of 2,900 square miles below the Danube delta, is an area of low hills, fens and sandy steppes.

Soft coal is Bulgaria's principal mineral; production in 1954 was estimated at 8,400,000 metric tons. Other minerals include chromite, gypsum, iron ore, manganese ore, rock salt and silver.

Bulgaria's climate is characterized by cold winters and warm summers approaching the subtropical in the south. Rain and snowfall average twenty to forty inches a year. Temperatures at Sofia average 28° in January and 69° in July.

## Burma (Republic)

Area: 261,757 square miles.

Population (est. 1955): 19,434,000 (1948). Burmans, 60%; Shans, 7%; Chins, 2%; Kachins, 1%; Indians, 6%; Chinese, 1%; Indo-Burmans, 1%; others, 22%).

Density per square mile: 74.2.

President: Dr. Ba U.

Premier: Ba Swe.

Principal cities (census 1953)\*: Rangoon, 711,520 (capital, chief port); Mandalay, 182,367 (river port, upper Burma); Moulmein, 101,720 (seaport); Bassein, 77,382 (rice, river port).

Languages: Burmese (70%), English.

Religions: Buddhist, 90%; Mohammedan, 3%; Hindu, 3%; Christian, 2%; others, 2%.

\* Preliminary figures.

**HISTORY.** Lying on the eastern side of the Bay of Bengal between India, China and Thailand, the Union of Burma came into existence as an independent state on Jan. 4, 1948. After that time the new republic had to hold its own with difficulty against attacks on the one hand by Communist rebels seeking its overthrow and on the other by Karen insurgents seeking wide territorial autonomy.

In 1612 the British East India Company sent agents to Burma, and in the 17th and 18th centuries the Burmese stoutly resisted the efforts of British, Dutch and Portuguese traders to establish posts on the Bay of Bengal. Actual British rule dated from 1826, and in 1886 British troops forced the annexation of all Burma to India. On Apr. 1, 1937, the British separated Burma from India and set it up as a Crown colony with its own legislature and a British Governor.

For hundreds of years a battlefield of petty princes, Burma became a key battleground in World War II largely because the 800-mile Burma Road was the Allies' vital supply line to China. The Japanese invaded the country in Dec. 1941, and May 1942, had occupied most of it, cutting the road. In Aug. 1942, the Japanese set up a puppet government.

After one of the most difficult campaigns of the war, Allied forces liberated most of Burma prior to the Japanese surrender on Aug. 14, 1945. Civil government was resumed in Oct. 1945, but the native nationalist feeling continued strong.

An agreement with Britain signed Jan. 27, 1947, gave the Burmese an opportunity to determine their future form of government. The Constituent Assembly, dominated by the leftist Anti-Fasc



People's Freedom League, declared Burma a republic on June 17, 1947, and sovereignty was formally transferred on Jan. 4, 1948.

U Nu became Premier July 19, 1947, upon the assassination of U Aung San. He resigned in favor of Ba Swe on June 5, 1956.

**GOVERNMENT.** The Constitution adopted by the Constituent Assembly Sept. 24, 1947, provides for a government headed by the President, who is elected by the two houses of Parliament—the Chamber of Deputies and the Chamber of Nationalities—meeting in joint session. The President appoints the Premier on nomination of the Chamber of Deputies; the Cabinet must enjoy the confidence of the Chamber of Deputies. Four frontier areas—the Shan, Kachin and Karenin states, and the Chin special division—are constituent parts of the Union but enjoy some autonomy.

The Anti-Fascist People's Freedom League won about two-thirds of the 250 seats in the Chamber of Deputies in the first elections held under the new Constitution in 1951-52.

The Constitution contemplates a form of state socialism, with the operation of all public utilities and the exploitation of all natural resources to come eventually under state control.

**SOCIAL AND ECONOMIC CONDITIONS.** In 1954 Burma had 6,907 state and recognized primary schools with 755,900 pupils and 477 secondary schools with 101,300 students. Because of the many monastic schools, the percentage of wholly illiterate men is small. The University of Rangoon and the university college of Mandalay had a total of 9,000 students in 1955.

The natives in general are Mongolian; the Burmese are the most advanced.

Indians, settled in the delta region, supply most of the coolie labor, while the Chinese constitute the artisan and merchant class. Buddhism, the national religion, profoundly affects the national character; every village in the country has its temple.

Burma is essentially agricultural, with crop growing concentrated in the delta and river valleys. It is a leading producer of rice, the staple food, which occupies two-thirds of the cultivated area. Output in 1955-56 was 5,775,700 metric tons. Crops grown in the dry zone in upper Burma include millet, cotton, peanuts and sesame. Other crops include tobacco, fruit, vegetables and cereals. The number of rubber plantations has increased. The principal domestic animals are water buffalo (1,046,000 in 1954), used as a beast of burden in the delta, and small humped oxen, which predominate in other areas.

Leading industries include silk weaving and dyeing, rice husking, oil refining and wood carving.

Recent trade statistics are as follows (in millions of kyats):

	1952-53	1953-54	1954-55
Exports	1,241.0	1,051.0	1,120.1
Imports	885.5	946.7	905.8

Chief exports in 1954-55 were rice and products (75%) and metals and ores (5%). Leading customers were India (34%), Japan (18%) and Britain (9%); leading suppliers were Britain (24%), Japan (23%) and India (17%).

Recent government finance data, on ordinary and capital account, are as follows (in millions of kyats):

	1952-53*	1953-54*	1954-55*
Revenue	954.6	995.7	1,101.0
Expenditure	1,154.7	1,300.8	1,030.9

\* Preliminary.

The principal commercial arteries are the Irrawaddy, navigable for 900 miles to Bhamo, and its tributaries. Regular steamer service is maintained to Bhamo. Railways, designed to supplement river transport, totaled 1,800 miles in 1954, all state-owned. There are no rail connections with India or any other country. The length of roads was 12,472 miles in 1949. The Burma Road connects Lashio, a rail terminus in northern Burma, with Kunming, China.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Slightly smaller than Texas, Burma is divided into three natural regions: the Arakan Yoma, a long, narrow mountain range forming the barrier between Burma and India; the Shan Plateau in the east, extending southward into Tenasserim; and the Central Basin running down to the flat, fertile delta of the Irrawaddy in the south. This delta contains a network of inter-communicating canals and nine principal mouths.

Mineral resources are considerable but, in many cases, undeveloped. Production by the Burmah Oil Company, Ltd., in 1939, was 7,396,000 barrels, but it was only 1,495,000 barrels in 1955. Production of tin in concentrates was 960 metric tons.

Other minerals include lead, silver, zinc, nickel, cobalt, copper, gold, iron ore, molybdenum, coal, uranium (reported), rubies, sapphires and jade.

More than half of Burma is forested. Teak, valuable for naval construction, is the main timber product. Its cutting is strictly controlled. Natural rubber exports were estimated at 10,800 metric tons in 1955.

Burma forms part of the Asiatic monsoon region, but its climate is modified by the topography. There are three sea-

sons: (1) cool and rainless (November through February); (2) hot and rainless (March through May) and (3) rainy (June through October). At Rangoon the annual temperature range is only 10°; at Mandalay, about 20°. Annual rainfall at Rangoon is about 100 in.; at Mandalay, 33.4 in.

## Cambodia (Kingdom)

Area: 65,958 square miles.

Population (est. 1954): 4,100,000.

Density per square mile: 62.2.

Ruler: King Norodom Suramarit.

Premier: Khim Titi.

Principal cities (est. 1953): Phnompenh, 375,000 (capital); (1941) Battambang, 23,567 (rice).

Monetary unit: Riel.

Languages: Cambodian, French, Annamese.

Religion: Buddhism.

**HISTORY AND GOVERNMENT.** Cambodia is bounded on the south and east by south Vietnam, on the north by Laos and Thailand, on the west by Thailand and on the southwest by the Gulf of Siam. Its recorded history dates back to the beginning of the Christian era when it was known as Fou-Nan. It was absorbed in about 600 A.D. by the Khmers, under whose rule magnificent temples were built at Angkor. The arrival of the French, who were granted a protectorate in 1863, prevented the annihilation of the Khmer empire by the Vietnamese and Siamese. It was occupied by Japan during World War II.

Cambodia became a constitutional monarchy in 1947 and an associated state in the French Union in 1950. The transfer of sovereignty was completed by the Paris agreements of Dec. 29, 1954. In Sept. 1955, the National Assembly voted to withdraw from the French Union. Cambodia was admitted to the U. N. in 1955.

Under a Constitution promulgated May 6, 1947, the sovereign exercises executive power through the Cabinet headed by the Premier. Legislative power is vested in an elected Assembly.

The present ruler succeeded to the throne March 3, 1955, on the abdication of his son, Norodom Sihanouk.

**SOCIAL AND ECONOMIC CONDITIONS.** About 90% of the population is Cambodian, 5% Annamese and 4% Chinese. The forested regions of the northeast are inhabited by various primitive peoples.

Agriculture is the basis of the economy. The chief crop is rice, grown principally in the Battambang area. Other crops include tobacco, kapok, cotton, rubber, pepper and maize. Cattle breeding is of major importance. Native industries include silk and cotton weaving, rice milling and the salting of fish obtained from Lake Tonle Sap during the low-water season.

Leading exports include rice, rubber, animal products, wood and hides and skins. A large part of the trade is with France and Vietnam.

There are about 875 mi. of navigable waterways; small steamers can reach Phnompenh on the Mékong; a railroad runs from Phnompenh to the Thai frontier.

**NATURAL FEATURES AND RESOURCES.** CLIMATE. Cambodia consists chiefly of large alluvial plain ringed in by mountains and on the east by the Mékong river. The plain is centered on Lake Tonle Sap, which is a natural storage basin of the Mékong.

Forests cover about 75% of the country, but most are unexploited. Deposits of iron ore, limestone and phosphate exist but also are undeveloped.

The climate is tropical and resembles that of many monsoonal countries, with a dry season from December through May and a wet season from June through November.

## Chile (Republic)

(República de Chile)

Area: 286,396 square miles.

Population (est. 1955): 6,560,000 (white 30%; mestizo, 65%; Indian, 5%).

Density per square mile: 22.9.

President: Carlos Ibáñez del Campo.

Principal cities (census 1952): Santiago, 1,348,283 (capital); Valparaíso, 218,823 (port); Concepción, 119,887 (farming center); Viña del Mar, 85,281 (resort center); Antofagasta, 62,272 (nitrates).

Monetary unit: Peso.

Language: Spanish.

Religion: Roman Catholic.

**HISTORY.** Chile has had a relatively tranquil history amid its neighbors' long record of strife, but it has suffered repeated labor disturbances in recent years.

Europeans first arrived in 1536, when Diego de Almagro, an associate of Pizarro, led an unsuccessful invasion from Peru. Five years later another Spaniard, Pedro de Valdivia, founded Santiago. On Sept. 18, 1810, Chile rebelled against Spanish rule, but independence was not won completely until 1818, when Bernardo O'Higgins and José de San Martín finally crushed the Spanish armies.

Chile, which has never lost a war, fought with Bolivia and Peru in 1879-83 and won the province of Antofagasta, Bolivia's only outlet to the Pacific, as well as extensive areas from Peru. In World War I, Chile was neutral. The overthrow in 1931 of Colonel Carlos Ibáñez, who had seized power in 1927, was followed by a brief chaotic period in which seven Presidents tumbled in and out of office, but Dr. Arturo Alessandri (1932-38) did much to restore Chile's political and economic order.

Pedro Aguirre Cerda, victor in the 1952

elections, initiated an extensive Socialist program before his death on Nov. 25, 1941. Under both external and internal pressure, the latter notably from its strong Communist party, Chile broke relations with the Axis on Jan. 20, 1943; however, it did not declare war on Japan until Feb. 14, 1945.

Juan Antonio Ríos, who succeeded Aguirre, died on June 27, 1946. Following a special election, Gabriel González Videla, candidate of a leftist-center coalition, became President on Nov. 3, 1946. His administration was plagued by recurrent labor disputes, some of which were said to be Communist-inspired. He pursued a strong anti-Communist policy. Carlos Ibáñez was elected to succeed him Sept. 4, 1952.

**GOVERNMENT AND DEFENSE.** The nation elects a President every six years, a Senate of forty-five members every eight years (one half renewable every four years) and a Chamber of Deputies of 147 members every four years. The President is assisted by a Cabinet responsible to him but subject to impeachment by Congress, which also may override a presidential veto by two-thirds vote. All literate citizens over twenty-one may vote in elections.

Military service is compulsory, beginning at twenty with an initial training period of nine months, after which a civilian is on reserve until the age of forty-five. The navy had in 1955 one old battleship of 28,000 tons, two light cruisers (acquired from the U. S. in 1951), six destroyers, six frigates, five submarines, two coast defense ships and smaller craft. The air force was expanded during World War II.

**SOCIAL AND ECONOMIC CONDITIONS.** Education, free and compulsory between 7 and 15, is directed by the central government. In 1943, illiteracy was estimated at 24 per cent, third lowest in Latin America. In 1951 there were 5,064 primary schools with 721,879 pupils and (1952) 332 secondary schools with 86,652 pupils. There are five universities.

The base of the white population is Spanish, although there are some German, English, Irish and Scotch. Roman Catholicism is the dominant religion, but church and state were separated in 1925.

Chilean agriculture is mostly confined to the temperate central valley, similar to that of California. The available productive land is extremely limited, and most of it must be irrigated. Wheat (1954-55: 1,078,000 metric tons) is the leading crop, followed by potatoes, oats, barley, corn, string beans and fruits. Grapes, next to wheat in acreage, produced an estimated 68,200,000 gallons of wine in 1955. Feudal-type estates, averaging 2,500 acres, predominate. Cattle in 1954 totaled 2,363,700 and sheep (1951) 6,500,000. Wool production (1955) was about 9,000 metric tons (clean).

**Foreign trade** (In millions of U. S. dollars):

	1953	1954	1955
Exports	409	401	472
Imports	335	343	376

In 1954 the leading customers were the U. S. (47%), Britain (14%) and Argentina (9%); leading suppliers were the U. S. (41%), Argentina (15%) and Peru (8%). Chief exports in 1954 were copper (58%) and nitrate (17%). The leading imports were machinery and vehicles, textiles, sugar, and iron and steel and manufactures.

Except for mineral processing, most manufacturing is of low-priced consumer's goods, particularly textiles. A steel industry was established in 1946; production for the year 1955 amounted to about 309,000 metric tons.

Highway mileage totaled approximately 31,250 in 1951, about a third improved. Rail mileage is 5,434, partly electrified. Civil aviation is highly developed in the interior, and several international lines serve the country. According to *Lloyd's Register*, the merchant marine had 101 vessels (100 tons and over) aggregating 229,774 gross tons on June 30, 1955.

Recent financial data are as follows (in billions of pesos):

	1954*	1955†	1956†
Revenue	74.4	91.6	170.4
Expenditure	82.9	91.6	170.4

\* Preliminary. † Budget estimate.

The funded external debt on Dec. 31, 1953, was £17,440,974, \$106,595,500 and 85,832,400 Swiss francs; the direct internal debt, 10,363,370,454 pesos.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** A narrow, mountainous land, Chile has one-third of its area covered by the towering ranges of the Andes. In the north is the mineral-rich Atacama Desert, between the coast mountains and the Andes. In the center is a 700-mile-long valley, thickly populated, between the Andes and the coastal plateau. In the south, the Andes border on the ocean.

At the southern tip of Chile's mainland is Punta Arenas, the southernmost city in the world, and beyond that lies the Strait of Magellan and Tierra del Fuego, an island divided between Chile and Argentina. The Juan Fernández Islands, in the South Pacific about 400 miles west of the mainland, and Easter Island, about 2,000 miles west, are Chilean possessions.

The basis of the country's economy is its mineral resources in the northern desert provinces of Atacama, Antofagasta and Tarapacá, where the only natural nitrate in the world is found. Some 60 per cent of the world's iodine is obtained as a by-product of nitrate processing. Chile's world



monopoly in nitrate, however, declined in importance with development of the synthetic product.

The world's largest copper reserve, estimated at 134 billion pounds, is in Chile, and also more than 900 million tons of high grade iron ore. The reserve of Chilean coal, noted for quantity rather than quality, exceeds two billion tons.

Mineral production in 1955 was as follows: coal and lignite, 2,308,073 metric tons; copper, 433,570 tons; iron ore, 1,523,229 tons; nitrate of soda, 1,540,219 tons; gold, 122,877 oz.; and silver, 1,714,495 oz. Mercury, manganese ore, cobalt, zinc, tungsten and molybdenum also are produced, and deposits of uranium have been reported. Oil was first produced in Tierra del Fuego in Dec. 1945. Production for 1955 was approximately 3,130,000 barrels.

Forests, estimated to cover 35 million acres in the southern provinces, yield a variety of commercial wood, including conifer, laurel and magnolia.

In Chile's extreme north the days are hot, the nights warm on the coast and cool in the interior. Central Chile's climate is comparable to that of southern California, and southward in the lake regions the climate is similar to that of the U. S. Pacific Northwest. In the extreme south, fogs and storms keep the mean temperature low. Santiago has extreme recorded temperature ranges of 25° and 96°. Rainfall there averages 14 inches annually.

## China (Republic)

### (Chung-Hua Min-Kuo)

Area: 3,911,209 square miles.\*

Population (census 1953): 590,194,715.\*

Density per square mile: 150.9.

President, Nationalist China: Generalsissimo Chiang Kai-shek.

Premier: O. K. Yui.

Chairman, Communist China: Mao Tse-tung.

Premier: Chou En-lai.

Principal cities (census 1953): Shanghai, 6,204,417 (chief port, industrial and financial center); Peking (Peiping), 2,768,149 (capital, Communist China); Tientsin, 2,693,831 (commercial center); (est. 1952) Chungking, 2,000,000 (river port, trade center); Mukden, 1,790,000 (Manchurian industrial center); Canton, 1,210,000 (southern commercial center); Wuhan, 1,090,000 (river port); Nanking, 1,020,000 (former Nationalist capital).

Monetary unit: Chinese dollar (yuan).

Language: Chinese.

Religions: Confucianism, Buddhism, Taoism, Mohammedanism, Christianity.

\* Including Province of Formosa (Taiwan), Manchuria and Tibet. Census not taken in Formosa (population estimated at 7,591,298); population total excludes an estimated 11,743,320 Chinese resident abroad. The total population figure is regarded with considerable reserve.

**HISTORY.** By 2000 B.C., the Chinese were living in the Hwang Ho basin, and they

had achieved an advanced stage of civilization by 1200 B.C. The great philosophers, Lao-tse, Confucius, Mo Ti and Mencius lived during the Chou dynasty (about 1122 to 249 B.C.). The warring feudal states were first united under Emperor Ch'in Shih Huang Ti, during whose reign (246-210 B.C.) work was begun on the Great Wall. Under the Han dynasty (206 B.C. to A.D. 220) China prospered and traded with the West.

The T'ang dynasty (618-907) has often been called the golden age of Chinese history. Painting, sculpture and poetry flourished under royal patronage, and printing made its earliest known appearance.

The Mings, last of the native rulers (1368-1644), overthrew the Mongol or Yuan dynasty (1280-1368) established by Kublai Khan, whose dominions extended into eastern Europe. The weakening Mings in turn were overthrown in 1644 by invaders from the north, the Manchus.

The Chinese closely restricted foreign activities, and by the end of the 18th century only Canton (and the Portuguese port of Macao) were open to European merchants. Following the Anglo-Chinese War of 1839-42, however, several treaty ports were opened and Hong Kong was ceded to Britain. Treaties signed after further hostilities (1856-60) weakened Chinese sovereignty and removed foreigners from Chinese jurisdiction. The disastrous Chinese-Japanese War of 1894-95 was followed by a scramble for Chinese leases and concessions by European powers which resulted in the Boxer Rebellion (1900), suppressed by an international force.

The death of the Empress Dowager Tzu Hsi in 1908 and the accession of the infant Emperor Hsüan T'ung (Pu-Yi) were followed by a nation-wide rebellion led by Dr. Sun Yat-sen, who became first President of the Provisional Chinese Republic in 1911. The Manchus abdicated on Feb. 12, 1912. Dr. Sun resigned in favor of Yuan Shih-k'ai, who suppressed the republicans but was forced by a serious rising in 1915-16 to abandon his intention of declaring himself Emperor. Yuan's death in June 1916, was followed by years of civil war between rival militarists and Dr. Sun's republicans. The death in 1925 of Dr. Sun, who had controlled only the Canton area in opposition to the recognized regime, was followed by a revival of the Kuomintang party, which practically deified him. Nationalist forces, led by Gen. Chiang Kai-shek and advised originally by Communist experts, soon occupied most of China, setting up a Kuomintang regime in 1928. Internal strife continued, however, and Chiang broke with the Communists.

An alleged explosion on the South Manchurian Railway on Sept. 18, 1931, brought invasion of Manchuria by Japanese forces, who installed the last Manchu Emperor,

Henry Pu-Yi, as nominal ruler of the puppet state of "Manchukuo." Japanese efforts to take China's northern provinces in July 1937, were resisted by Chiang Kai-shek, who meanwhile had succeeded in uniting most of China behind him. Within two years, however, Japan seized most of the ports and railways. The Kuomintang government retreated first to Hankow and then to Chungking, while in "Occupied China" the Japanese set up a puppet government at Nanking headed by Wang Ching-wei. In 1943 Chiang became political as well as military leader of "Free China."

When the Japanese surrendered in 1945, a treaty was signed with the Soviet Union providing for Soviet withdrawal from Manchuria, joint Chinese-Soviet control of Manchurian railways for 30 years, a joint Chinese-Soviet naval base at Port Arthur and a free port at Dairen.

The surrender of Japan also touched off a civil war between Nationalist and Communist forces for control of China.

By the end of 1949, all China except the island of Formosa was under Communist control. Barricaded on Formosa, the Nationalist regime had little means at its disposal to make any effective counter-attack upon the mainland. The U. S., however, after the outbreak of the Korean war in June 1950, promised naval and air aid to repel any invasion of Formosa.

The Communists meanwhile set up in September 1949, a soviet-type government. After prolonged negotiations, the People's government and the Soviet Union signed a 30-year treaty of friendship and mutual aid on Feb. 14, 1950; its published terms provided for a \$300,000,000 Soviet credit and for the return of the Changchun railroad to China and the eventual return of Port Arthur and Dairen.

The Communist regime subsequently was recognized as the legal government of China by many nations but was unsuccessful in its efforts to secure a place in the U. N. It threw several hundred thousand men into the Korean war of 1950-53 in a futile effort to drive U. N. forces from Korea.

**GOVERNMENT AND DEFENSE.** Under the Nationalist Constitution of 1947, the highest state organ is the National Assembly, which meets once each three years and is the "sovereign organ of the people." Its members are elected for 6-year terms on the basis of territorial and professional representation. The Assembly elects the President and Vice President of the Republic for 6-year terms. The organs of government include the Executive Yüan (Cabinet), whose members, headed by the Premier, are appointed by the President with the concurrence of the Legislative Yüan and the Legislative Yüan, which exercises legislative functions when the Assembly is not

in session and has ultimate control over the cabinet.

The definitive Constitution of the People's republic, adopted by the National People's Congress on Sept. 20, 1954, established the Congress as the highest organ of state power. Its 1,226 members are elected for a 4-year term by local government bodies, the armed forces and Chinese resident abroad. Executive power is vested in the Chairman or President, elected for a 4-year term by the Congress. He appoints the Premier and his Cabinet. The Cabinet, the highest administrative organ, consists of 35 ministers. Effective control is exercised throughout by the central committee of the Chinese Communist party.

**Defense.** Military service is compulsory in Nationalist China; the initial training period is one or two years. The fighting strength of the army in 1956 was upwards of 600,000 men. The air force had about 500 planes and the navy, some 100 small vessels.

The chairman is commander-in-chief of the Communist armed forces. In 1955 they numbered 3,000,000 to 4,000,000, divided into several field armies. The air force had about 2,000 Soviet-built planes, about half of them jet fighters. About 50 naval vessels, including 20 submarines, were reported to have been acquired from the U.S.S.R.

#### **SOCIAL AND ECONOMIC CONDITIONS.**

**Education.** Emphasis on the mainland is upon technical training and inculcation of the Communist ideology. In 1955, there were reported to be about 55,500,000 primary school students, 3,500,000 secondary school students and 289,000 college and university students.

The mass literacy movement has been accompanied by the replacement of the old classical or "dead" Chinese language with the popular vernacular (Pai-hua) of the Mandarin dialect, employing perhaps 1,000 of the most essential of the many thousands of Chinese ideographs. Plans were approved in Feb. 1956 for the introduction of a modified Latin alphabet to replace the ideographs.

**Agriculture.** In China, nearly 80 per cent of the population depends on the land for livelihood. Subsistence crops are necessarily emphasized, but China is still not self-sufficient in food. Cultivation is intensive, holdings are small, and irrigation is widely practiced. The three most important food crops are rice, wheat and maize; total grain production was officially estimated at 180,000,000 metric tons in 1955.

In northern China, wheat, barley, corn, sorghum, millet and other cereals, and beans and peas predominate, whereas in the south, rice, sugar and indigo are most



important. The Yangtze basin, one of the most favored agricultural regions in the world, is China's premier granary. Tea, the chief beverage, is grown mainly in the central uplands, coastal ranges and Szechwan.

Silkworm culture is practiced widely, especially in the lower Yangtze valley. Cotton, the major purely industrial crop, runs from 2,500,000 to 4,000,000 bales a year. Soybeans are of ever-increasing importance. Other crops include fibers, tobacco, vegetable oils, cane sugar and many medicinal plants and spices.

The urgent need for subsistence crops has confined grazing grounds for sheep and cattle to the dry northwest and to mountain pastures. However, such animals as goats, poultry and especially pigs are raised everywhere. According to unofficial estimates, Communist China had in 1953 28,812,000 cattle, 17,190,000 sheep, 77,376,000 hogs, 34,110,000 goats and 11,885,000 buffalo.

**Industry.** Industrially, China is still in its infancy. Development has been mainly in the erection of textile mills, silk and flour mills, match factories, tanneries and a few steel and cement mills. The production of consumer's goods far exceeds that of producer's goods, which must still be imported. Much of the industry which had been developed in the lower Yangtze valley and the Shanghai area was moved westward in 1938 and 1939 to escape Japanese capture, and southward in 1948 to escape Communist control.

The Communist regime is reported to be concentrating upon Manchuria as China's industrial center and to be shifting some industries to the northwest. A five-year plan of industrial development beginning in 1953 was announced in Dec. 1952. Steel production was 1,350,000 metric tons in 1952 and was to be increased to 4,120,000 tons by the end of 1957.

**Trade.** According to official reports, the U.S.S.R. and its satellites accounted for 80% of Communist China's total trade in 1954. The 1952 trade total was unofficially estimated at U. S. \$2,000,000,000, and the 1953 total was officially placed at 36% more than that in 1952. Major exports include textiles and products, tung oil and pig bristles.

**Communications.** Exploitation of many of China's natural resources has been handicapped by the lack of internal communications. There is an extensive system of inland waterways and canals, however, and in central and south China most of the freight is carried by water.

The modern highway system now totals about 90,000 miles, but at least half of the system is in need of extensive repairs. The railway system of 16,500 mi. (Dec. 1955), concentrated in the lower Yangtze

basin and in north China and Manchuria has been rehabilitated and is being extended by the Communists. The main port is Shanghai.

**Finance.** The 1955 Communist budget estimated revenue at 31,192,520,000 people's yuan (2.37 yuan = U. S. \$1) and expenditure at 29,736,720,000 yuan. The Nationalist government on Formosa continued to depend on U. S. aid to balance its budget.

**NATURAL FEATURES AND RESOURCES.** **CLIMATE.** China has about 1½ times the area of the continental United States. Its coast line is roughly a semi-circle about 2,150 miles long. The greater part of the country is mountainous, and only in the lower reaches of the Hwang Ho (Yellow) and Yangtze Kiang rivers are there extensive low plains.

The principal mountain ranges are the Tien Shan, to the northwest; the Kunlun chain, which attains a maximum height of 23,890 feet, running south of the Takla Makan and Gobi deserts; and the Trans-Himalaya, connecting the Kunlun with the borders of China and Tibet. Manchuria is largely an undulating plain connected with the north China plain by a narrow lowland corridor. Inner Mongolia contains the relatively fertile southern and eastern portions of the Gobi. The large island of Hainan (13,500 sq. mi.) lies off the southern coast.

Hydrographically, China proper consists of three great river systems. The northern part of the country is drained by the Hwang Ho river, 2,700 miles long and mostly unnavigable. The central part is drained by the Yangtze Kiang, the fifth longest river in the world (3,100 mi.). The Si Kiang in the south is about 1,650 miles long and navigable for a considerable distance. In addition, the Amur forms part of the northeastern boundary.

**Minerals.** Mineral resources are considerable. Iron ore, far less plentiful than coal, is mined principally in the lower Yangtze valley and in north China. Tin mined in Yunnan and southwest Szechwan, has been a major mineral export. On some rarer minerals, notably antimony and tungsten, China is sometimes the world's leading producer. Lead, zinc, silver, mercury and gold are also mined, and discovery of uranium has been reported. Mineral production in 1954 was estimated as follows: coal, 67,000,000 metric tons; iron ore, about 6,000,000 tons; tin (in ore) 12,300 tons; tungsten concentrates, 18,000 tons.

**Forest and Fisheries.** China urgently needs reforestation. Most remaining forests are on inaccessible mountain slopes. Bamboo is cultivated in groves throughout the country south of the Tsinling mountains.



Both sea and river fisheries are rich and varied, and fresh or salted fish is a staple food in many districts. Coastal fisheries are at Shantung, Chekiang and Kwantung. *Climate.* There are great diversities of climate. North China has the coldest winters in the world for its latitude (23.5° average in January at Peiping). The Yangtze valley is warmer, with winter temperatures more like those of Britain, while the south has warm subtropical winters. Summer temperatures are uniformly hot throughout China (about 79° in July at Peiping and 82° at Hong Kong). South China receives regular rainfall averaging from 40 to 60 inches annually, but in the north rainfall is irregular and not as heavy; droughts and floods are common.

**FORMOSA (TAIWAN)**—Status: Province (Part of Republic of Nationalist China).

Area: 13,885 square miles.

Population (est. Jan. 1955, excluding troops and militia): 8,750,610.

Capital: Taipei (Taihoku), 670,242.

Foreign trade (1955): exports, U. S. \$133,441,000 (61% to Japan); imports, U. S. \$91,640,000\* (64% from Japan). Chief exports: sugar (51%), rice (25%), tea (4%).

Agricultural products (est. 1955, in metric tons): rice (paddy), 1,733,000; tea, 14,000; bananas, pineapples, sweet potatoes.

Industries: sugar refining, canning, cement, chemicals, wood, paper.

Minerals: coal (1955: 2,359,300 metric tons), gold, petroleum, silver, sulfur.

\* Excludes U. S. aid imports (\$81,909,000) and those with self-provided exchange.

Formosa is a large island in the western Pacific, separated from China to the west by the Taiwan straits (narrowest point, 90 mi.). The Pescadores (Bokoto) (about 77 sq. mi.) and other outlying islands became administratively a part of Formosa under Japanese rule. Formosa, ceded to Japan in 1895 after the Chinese-Japanese War, remained Japanese until it was restored to China in 1945, in accordance with the Cairo conference of 1943. It was the only territory under the control of the Nationalist regime after 1949.

Most of the inhabitants are of Chinese stock. There are also about 180,000 aboriginal tribesmen in the mountainous interior. Sugar cane is grown under the plantation system.

Formosa is one of the world's chief sources of camphor, and government monopolies of camphor, salt, opium and tobacco have been established. Forest resources are enormous. Railway mileage totaled (1955) 2,800 and roads (1953) 16,380.

The climate is tropical, with temperatures above 60° (except in mountain areas) every month except January.

**SINKIANG (CHINESE TURKESTAN)**—Status: Chinese province under joint Chinese-Soviet economic control.

Area: 660,617 square miles.

Population (census 1953): 4,873,608.

Capital: Tihwa (Urumchi) (20,000).

Chief exports: wool, cotton, furs, skins, sheep, cattle, horses.

Agricultural products: wheat, corn, rice, cotton, sorghum, beans, fruit.

Minerals: jade, gold.

Largest and most remote of China's provinces, Sinkiang experienced violent Mohammedan uprisings after 1932. The Chinese Governor, Gen. Shen Shih-tsai, re-established order in 1937 with Soviet support. In 1943, Russian troops withdrew, taking with them all their economic installations, but following World War II Soviet influence was gradually restored and the province surrendered to the Chinese Communists in late 1949. On Mar. 27, 1950, the People's government signed an agreement with the Soviet Union providing for joint exploitation of Sinkiang's natural resources.

Chinese constitute about 5 per cent of the population; there are 14 other ethnic groups, mostly Turki tribes of the Sunni Moslem faith. The Mongol tribes are Lama Buddhists. There are vast stretches of desert and arid land, and the limited area under cultivation is mostly in oases and river valleys.

Almost all of the limited foreign trade is conducted with Russia. About 85 per cent of the population lives in the western side of the province, adjacent to the Soviet Union and separated from China by desert land.

**TIBET**—Status: Nominally independent; under Chinese Communist control.

Area: 469,413 square miles.

Population (census 1953): 1,273,969.

Capital: Lhasa (about 20,000).

Ruler: The 14th Dalai Lama (Lingerh Pamo Töntrup).

Monetary unit: Sang.

Exports: wool, live animals, salt, hides, borax, tea, musk.

Agricultural products: barley, fruits, pulse, vegetables.

Minerals: borax, salt, coal, gold.

Tibet, north and northeast of the Himalayas, is the highest country in the world, averaging 16,000 feet in elevation and having many peaks ranging up to more than 25,000 feet. Chinese suzerainty over Tibet was established in the 18th century. The area was invaded by a British expeditionary force in 1904, but the Anglo-Russian Convention of 1907 recognized China's influence and stipulated that neither Russia nor Britain should interfere in Tibet's affairs.

Chinese Communist troops invaded the area in October, 1950. An agreement signed with Communist China in May, 1951, recognized the Dalai Lama as spiritual and temporal ruler but made Tibet virtually a Chinese province.

The religion and predominant factor in Tibet's social system is Lamaism, a late form of Buddhism modified by animism and primitive magic. Education is in the control of the many monasteries, some of which have more than 1,000 monks. A large number of the population are lamas, mostly celibates. Both polyandry and polygyny are practiced.

The climate is extremely variable. Total yearly precipitation in most of the country is only about 8 inches.

## Colombia (Republic) (República de Colombia)

Area: 439,519 square miles.

Population (est. 1955): 12,657,000 (mes-tizo 68%; white, 20%; Indian, 7%; Negro, 5%).

Density per square mile: 28.8.

President: Lt. Gen. Gustavo Rojas Pinilla.

Principal cities (est. 1954): Bogotá, 765,360 (capital); Medellín, 431,380 (mining); Cali, 365,800 (coffee, mining); Barranquilla, 324,700 (seaport); Cartagena, 142,800 (seaport); Bucaramanga, 136,170 (industrial center).

Monetary unit: Peso.

Language: Spanish.

Religion: Roman Catholic.

**HISTORY.** Colombia, nearly nine times the size of New York state, is the only country in South America with frontage on both the Pacific and the Caribbean. Its northern coast was one of the first parts of the Americas to be visited by Spanish explorers. Darien, the first permanent European settlement on the American mainland, was founded in 1510, Santa Marta in 1525, and Bogotá in 1538.

New Granada, as Colombia was called until 1861, was comparatively neglected during the Spanish colonial era. After winning independence from Spain during a fourteen-year struggle ending in 1824, the country established a republic in 1831, including the area that now is Panamá. Intermittent civil war plagued Colombia until 1903, when Panamá, with United States backing, seceded from the republic.

The century-old boundary dispute with Peru over Leticia almost led to war in 1931, but a settlement was arranged through the League of Nations in 1934-35.

Bogotá, host at the time to the Ninth International Conference of American States, was swept by a destructive but unsuccessful revolt on April 9, 1948, following the assassination of Jorge Eliécer Gaitán, extremist Liberal leader. The 1949 presidential election, held on Nov. 27 and boycotted by the Liberals, was won by the Conservative candidate, Laureano Gómez, who took office on Aug. 7, 1950. Gómez returned to office on June 13, 1953, after being on leave of absence since Oct. 1951, but was immediately ousted in a *coup*

*d'état* led by Lt. Gen. Gustavo Rojas Pinilla, who became President.

**GOVERNMENT AND DEFENSE.** Colombia's President, who appoints his own Cabinet, is elected every four years and is not eligible to succeed himself immediately. The Senate—upper house of Congress—has 63 members elected for four years by direct vote. The House of Representatives of 123 members is directly elected for two years. Congress was superseded temporarily by a national constituent assembly in 1954. All citizens over the age of 21 are entitled to vote.

A term of military service is compulsory for men between twenty-one and thirty. The strength of the peacetime army averages about 13,000-14,000. With 2,500 personnel, the navy has two modern destroyers, one sea-going gunboat, three patrol craft, three frigates, six river gunboats and several launches. An infantry battalion and two frigates served in Korea.

**SOCIAL AND ECONOMIC CONDITIONS.** Primary education is free and technically compulsory. Illiteracy (7 years and over) was officially placed at 37% in 1951. By law, 10 per cent of the national budget goes for education. In 1953, 14,223 primary schools reported enrollment of 1,072,532 pupils, 585 secondary schools 65,618 and 220 commercial schools 17,340. In addition to the national University, founded at Bogotá, 1572, there were 20 other universities and 18 institutes and schools of higher learning.

Because of the former isolation of the interior, the language and manners in Bogotá are more purely Castilian than anywhere else in South America.

In recent years, notably since adoption of a new labor code (1944), the working classes have made important gains, including minimum wages, vacations and holidays, accident and sickness benefits, and the protected right of union organization.

Most of the people live by farming and cattle herding, but only a small part of the land is cultivated, and that by primitive means. Colombia's coffee, the nation's principal crop, is a mild variety that does not compete with Brazilian types. Exports in 1955 totaled 5,867,229 bags of 135 pounds each. Other crops include bananas, coconuts, tobacco, sugar cane, corn, cotton, cacao, beans, rice, tropical fruits and, in the temperate regions on plateaus and in mountain valleys, cereals and potatoes. Cattle were estimated at 15,512,000 in Dec. 1950, according to U. N. statistics.

The leading manufacturing industries are foodstuff processing, textiles and beverages. The 1953 industrial census showed 8,217 manufacturing enterprises with 152,106 employees. A new steel plant went into operation late in 1954.

Recent trade statistics, in millions of pesos, are as follows:

	1953	1954	1955
Exports	1,490.3	1,642.8	1,459.7
Imports	1,366.8	1,679.4	1,673.2

Leading exports in 1955 were coffee (84%), petroleum (11%) and bananas (3%). Leading customers were the U. S. (63%), western Germany (10%), Britain (4%) and Belgium (3%); leading suppliers, the U. S. (63%), western Germany (10%), Britain (4%) and France (3%).

Difficult terrain makes Colombia's rail and road building costly. Rail mileage was out at 1,782 (main-line track) in 1951; and improved highway mileage at 12,600. Air transit is well advanced, and there are 1,620 miles of navigable waterways.

Colombia's 1956 budget provided for expenditures of 1,331,471,685 pesos. On June 30, 1955, the internal debt was 892,441,000 pesos and the foreign debt (excluding interest) the equivalent of 219,664,000 pesos.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Through the western half of the country, three Andean ranges run north and south, merging into one at the Equadorean border. The eastern half is a low, jungle-covered plain, drained by spurs of the Amazon and Orinoco, inhabited mostly by uncivilized Indians. The fertile plateau and valley of the eastern range is the most densely populated part of the country.

Rich in minerals, Colombia has the third largest oil industry in Latin America (70 per cent controlled by U. S. interests). Production in 1955 was 39,712,000 barrels. The country is also rich in platinum and has world-famous emerald mines at Muzo in the eastern Andes. Mineral production includes gold (1955: 380,824 troy oz.), silver (112,038 oz.) and crude platinum (exports 1955: 27,526 oz.).

Colombian forests, covering a large part of the country from the western Andes to the eastern plain, are a great but little exploited source of wealth. Products include vanilla, quinine, ipecac, sarsaparilla, gums and balsams, tanning agents, dyewoods, hardwoods and rubber.

Alligators along many of the large rivers are hunted for hides. The rivers and lakes abound with fish and turtles, a source of commercial tortoise shell.

Although Colombia lies almost entirely in the north torrid zone, its climate is tempered by prevailing winds and high altitudes in the western, mountainous area. High temperatures and excessive moisture prevail in the lower areas, along the coast and in the larger river valleys. At Bogotá, the mean temperature stays in the 50's every month of the year; annual rainfall there is 42 inches.

## Costa Rica (Republic) (República de Costa Rica)

Area: 19,695 square miles.

Population (est. Dec. 31, 1955): 969,640 (1950: white and mestizo, 97.6%; Negro, 1.9%; Indian, .4%; Asiatic, .1%).

Density per square mile: 49.2.

President: José Figueres Ferrer.

Principal city (est. Dec. 31, 1955): San José, 99,839 (capital and only large city).

Monetary unit: Colón.

Language: Spanish.

Religion: Roman Catholic (state).

**HISTORY AND GOVERNMENT.** Costa Rica was discovered and probably named by Columbus in 1502. A Spanish province as early as 1530, it proclaimed its independence in 1821, and was a member of the Central American Union from 1823-38. Aside from boundary disputes with Panamá and Nicaragua, Costa Rica's modern history was comparatively tranquil until the spring of 1948, when a brief civil war followed congressional annulment of presidential elections in which Otilio Ulate Blanco defeated the Government candidate. Leftist-supported government forces surrendered on April 20, and on May 8 an 11-man junta took over and a Constituent Assembly was elected on Dec. 8, 1948. The Assembly met on Jan. 16, 1949, confirmed Ulate as President-elect, and, after drafting a new Constitution, dissolved on Nov. 8, on which date Ulate took office. José Figueres Ferrer was elected to succeed him in the July 1953 elections.

Under the 1949 Constitution the President and one-house Congress of 45 members are popularly elected for terms of four years.

The army was abolished in 1950. There is a police force of 1,000 and 700 coast guardsmen.

**SOCIAL AND ECONOMIC CONDITIONS.** Costa Rica's illiteracy rate (estimated at 21.2% in 1950) is the lowest in Central America, with elementary education free and compulsory. In 1951 there were 1,139 primary schools (116,157 pupils) and, in 1950, 24 secondary schools and 7 technical schools. The National University is at San José. The English language is taught in all of the primary schools.

Coffee, bananas, abacá fiber and cacao are the basic products of Costa Rican agriculture, which is characterized by the prevalence of small land holdings. Cotton, sugar cane, tobacco, corn, beans, rice and potatoes are subsidiary crops. Cattle are raised mainly for dairying.

Coffee production totaled 508,000 bags of 132 lb. each in 1954-55 (preliminary).

Manufacturing is virtually limited to locally-consumed products. Chief among those products are furniture, fine woodwork and tobacco.



Foreign trade data (in millions of U. S. dollars) are as follows:

	1953	1954	1955
Exports	80.15*	80.96*	78.93*
Imports	73.67	80.65	87.51

\* Banana valuation adjusted.

Leading customers in 1955 were the U. S. (54%), Germany (27%) and Canada (5%); leading suppliers, the U. S. (60%), Germany (9%) and Britain (7%). Leading exports were coffee (47%), bananas (39%) and cacao (7%); imports included textiles, machinery, vehicles and petroleum products.

In 1954 the rail system totaled approximately 800 miles; improved highways (1952), 950 miles; unimproved highways, 3,750 miles. According to *Lloyd's Register*, the merchant marine had 114 vessels (100 tons and over) aggregating 340,710 gross tons on June 30, 1955.

The 1956 budget (preliminary) balanced at 259,822,300 colones. The public debt was 351,489,000 colones on Dec. 31, 1955.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Most of Costa Rica is elevated tableland, from 3,000 to 6,000 feet above sea level, with sharp slopes to the Caribbean and Pacific. Cocos Island, about 300 miles off the Pacific Coast, is under Costa Rican sovereignty; although it is mostly tropical jungle, it is of potential strategic importance in the defenses of the Panama Canal.

Gold is the most valuable mineral, although silver, manganese, mercury and sulfur also exist. Oil indications have been found in the south.

The mountain slopes yield such forest products as balsa, cedar, dyewood, mahogany and rosewood.

The weather is cool and refreshing in the Costa Rican highlands, with average temperatures of 68°, and San José is increasing in importance as a tourist resort. Along the coasts, the mean annual temperature is about 82°. The rainy season is usually from April or May to about December; rainfall amounts to 70 inches yearly on the Pacific coast and more than 130 on the Atlantic or Caribbean.

## Cuba (Republic) (República de Cuba)

Area: 44,217 square miles.

Population (census 1953): 5,829,029 (1943: white, 74.3%; mulatto, 15.6%; Negro, 9.7%; Asiatic, .4%).

Density per square mile: 131.8.

President: Fulgencio Batista y Zaldívar.

Principal cities (census 1953): Havana, 1,157,445 (capital, industrial center); Holguín, 226,571 (trading center); Camagüey, 204,254 (cattle, sugar); Santiago de Cuba,

166,189 (seaport, mining); Bayamo, 143,611 (dairying).

Monetary unit: Peso.

Language: Spanish.

Religion: Roman Catholic.

**HISTORY.** The history of Cuba, largest of the many Caribbean islands, began for white men with discovery by Columbus on his first voyage in 1492. It was a Spanish colony until 1898, except for brief British occupancy in 1762-63. Open war raged between Cuban rebels and Spanish troops from 1867 to 1878. Fighting broke out again in 1895, and when the United States threatened to intervene, Spain felt its national dignity had been wounded. Strained relations between Spain and the U. S. led to war when the U. S. battleship *Main* was blown up in Havana harbor in Feb. 1898. At the end of the brief Spanish-American War, Spain gave up Cuba.

Until creation of the Cuban republic in 1902, the island was ruled by United States military authorities. For the first thirty-two years of the republic's life, the United States held the right to intervene in any crisis—a right which was invoked during insurrections which occurred in 1906, 1912 and 1917.

Corruption bedeviled Cuba after World War I, particularly during the eight-year presidency of Gerardo Machado, who was ousted in a 1933 revolution. Five different Presidents tried to rule in the next few months; out of this political whirlwind came the dictatorship of Fulgencio Batista, who climbed almost overnight from army sergeant to army commander in chief. In 1940 Batista legalized his reign by being elected to a four-year presidential term. He was succeeded in 1944 by Dr. Ramón Grau San Martín. Carlos Prío Socarrás won the June 1948 elections and took office Oct. 10 for a 4-year term. Prío was ousted March 10, 1952, however, by Batista, the former dictator, who became provisional President on April 4. He was elected to a 4-year term Nov. 1, 1954.

**GOVERNMENT.** Cuba's President is elected for a 4-year term by direct popular vote, in which women take part. The Cabinet, though named by the President, is responsible to the Congress—a 54-member Senate and a 130-member House, both elected for four years. Much Cuban lawmaking is done through presidential decree, reviewable by the Supreme Court. Cuban politics are dominated by personalities, with the result that there are frequent shifts in political grouping.

Compulsory military service was established in 1942. The army numbers about 15,000; the navy, 5,000, manning some twenty small coastal craft. The air force has 50 combat planes. Two U. S. air bases and one naval base built in World War I at a cost of more than \$30,000,000 were

turned over to Cuba in 1946. However, the United States retained its long-held naval base at Guantánamo.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is free and compulsory from 7 to 14. In 1952-53 public primary schools had 634,924 pupils; private, 98,724. Literacy was estimated at close to 70 per cent. The University of Havana, founded in 1721, had 18,379 students in 1952-53; Oriente University (Santiago), 1,256; Santa Clara, 67; Catholic University of Villanova (Havana), 523.

Half of the employed are engaged in agriculture, which normally accounts for more than 90 per cent of the exports. Often jolted by fluctuations in the price of sugar, of which it produced 4,924,200 short tons in 1955. Cuba has been seeking to vary its agricultural production. About two-thirds of the cultivated area is devoted to sugar cane. Other important crops are tobacco (1954-55 output: 52,500 short tons), coffee, cacao, fruits, vegetables, pineapples, corn, pineapples and rice. The livestock and dairy industry has progressed.

Manufactured products include sugar, molasses, syrup, brandy, rum, alcohol, cigars, cigarettes, cigar boxes, sponges, cement, cordage, salt, dressed hides, dairy products and canned goods. The leading industry is the processing of sugar cane and its products.

Foreign trade (in millions of pesos):

	1953	1954	1955*
Exports	640.3	539.0	594.2
Imports	489.7	487.9	495.5

\* Provisional.

Leading exports in 1955 were sugar (74%), tobacco and products (7%) and molasses (6%). Leading customers were the U. S. (67%), the U. S. S. R. (6%) and Japan (4%); leading suppliers, the U. S. (71%), the Netherlands Antilles (3%) and western Germany (3%).

Mainline railroads totaled 3,017 miles in 1949, plus 7,870 miles of industrial trackage, mostly on sugar estates. Improved highways totaled 2,320 miles. Domestic airlines are operated by the Cuban National Aviation Company, a Pan American subsidiary.

The budget for the fiscal year 1956-57 balanced revenue and expenditure at 330,149,470. The consolidated public debt totaled \$463,401,800 on June 30, 1955.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Long, narrow Cuba has maximum dimensions of 730 by 160 miles, and is approximately the same size as Pennsylvania. It has mountainous areas in the southeast, central area and west, but the rest is flat or rolling. The coastline, measuring more than 2,100 miles, is indented by many large bays. Cuba's numer-

ous short rivers are of slight importance commercially.

Rich mineral beds, mostly in the eastern province of Oriente, include iron, copper, manganese, chromium and nickel. Iron ore reserves, estimated at 3,500,000,000 tons, are 90 per cent held by U. S. steel interests. Virtually all mineral exports go to the United States; in 1955 they included nickel, 15,585 metric tons; copper ore, 65,292 tons; manganese ore, 258,442 tons.

Cuba has an estimated 3,500,000 acres of wooded land, with valuable cabinet woods, such as cedar and mahogany, as well as fibers, resins and oils.

The tempering influence of the trade winds on the island's tropical climate makes Havana's average temperature 77° with a range of only 10° (71° to 81°). The dry season lasts from November to April, and the warmer wet season occurs thereafter. Mean annual rainfall at Havana is about 50 inches.

## Czechoslovakia (Republic)

(Československa Republika)

Area: 49,354 square miles.

Population (est. 1955): 13,089,000 (1949: Czech, 67.0%; Slovak, 23.7% German, 3.2%; Magyar, 3.2%; Polish, Jewish and others, 2.9%).

Density per square mile: 265.2.

President: Antonín Zápotocký.

Premier: Viliam Široký.

Principal cities (est. 1948): Prague (Praha), 932,024 (capital, industrial center); Brunn (Brno), 277,196 (textiles); Ostrava (Moravská Ostrava), 183,794 (iron and steel products); (1947): Bratislava, 172,664 (Danube port); Pilsen (Plzeň), 118,152 (Skoda steel works).

Monetary unit: Koruna.

Languages: Czech (67%), Slovak (25%), German (4%), Hungarian, Ukrainian, Polish.

Religions (est. 1947): Roman Catholic, 77%; Czechoslovak Church, 8%; Protestant, 7%; Greek Orthodox, .5%; Jewish, .5%; others and no confession, 7%.

**HISTORY.** Few nations have had a more tragic history than Czechoslovakia, which twice won and lost its independence within 30 years. Born out of World War I, the young republic was an early victim of Nazi aggression in 1938-39. At its rebirth in 1945 following World War II, it enjoyed a measure of its traditional democracy under the shadow of Soviet control. During the next three years Czechoslovakia made by far the greatest economic progress of all the Soviet satellites, but the government was subjected to increasing Communist pressure, climaxed in the spring of 1948 by the Communists' seizure of control and the resignation of President Beneš.

It was probably about the 5th century A.D. that the ancestors of the Czechs and

Slovaks settled in the region of modern Czechoslovakia. Slovakia passed under Magyar domination, but the Czechs founded the kingdom of Bohemia, which was among the most powerful in Europe for centuries. German encroachment began in the 12th century and was furthered by the election in 1526 of a Hapsburg as Bohemian King. After the Czechs rebelled in 1618 and were defeated at the Battle of White Mountain in 1620, they were ruled for the next 300 years by the Hapsburgs as part of the Austro-Hungarian Empire. In World War I, Czech and Slovak patriots, notably Thomas G. Masaryk and Milan Stefanik, went abroad to promote support for Czech-Slovak independence, while Czechoslovak legions fought against the Central Powers. On Oct. 28, 1918, Czechoslovakia proclaimed itself a republic; shortly thereafter Masaryk was unanimously elected first President.

Between World Wars I and II, Czechoslovakia supported the League of Nations, formed the Little Entente with Yugoslavia and Rumania, and co-operated closely with France. President Masaryk was succeeded by Dr. Eduard Beneš in 1935.

Meanwhile, the German plan of aggression was under way. Czechoslovakia's German minority, led by Konrad Henlein, began demanding autonomy.

At the Munich conference on Sept. 30, 1938, France and Britain agreed that the Nazis could take the Czech Sudetenland on the German border. Dr. Beneš resigned on October 5, and Czechoslovakia became a federal union in the German orbit. The Poles, in the meantime, had seized Czechoslovakia's Teschen area, and Hungary had taken areas in Slovakia and Ruthenia. In March 1939, the Nazis set up Slovakia as a puppet state, declared Bohemia and Moravia to be Nazi protectorates, and gave Hungary the remainder of Ruthenia. Both Slovakia and Bohemia-Moravia were occupied by German troops. Beneš organized a government-in-exile in London in 1940.

Soon after the government returned to Czechoslovakia in April 1945, Ruthenia, the easternmost province, was ceded to Russia. On July 3, 1946, Communist Klement Gottwald formed a six-party coalition Cabinet. Amid increasing pressure from Moscow, Gottwald's Cabinet remained in office until a bloodless *coup d'état* of Feb. 23-25, 1948, when the Communists seized complete control. President Beneš resigned June 7 following parliamentary elections in which the Communists and their allies were unopposed. Parliament elected Gottwald to the presidency, and Communist Antonín Zápotocký succeeded to the premiership. On the death of Gottwald Mar. 14, 1953, Zápotocký became President and Viliam Široký was named Premier.

**GOVERNMENT AND DEFENSE.** Czechoslovakia's Soviet-type Constitution, promulgated on June 8, 1948, makes the 300-member unicameral Parliament the supreme organ of the state with control over courts and civil service. The government is headed by the President, elected by Parliament for a seven-year term, and the Prime Minister and his Cabinet who are appointed by the President but are responsible to Parliament. The Constitution contains nominal guarantees of civil liberties and provides that the state shall conduct all economic activity in the public interest on the basis of a single economic plan. Provision is made for limited Slovak autonomy under an elected council of 100 members.

The army, based on a cadre of Czech units which fought with the Red Army during World War II, has been trained and equipped by the Soviet Union with organization and armament on its pattern. Estimated strength is 300,000, including police.

**SOCIAL AND ECONOMIC CONDITIONS.** Illiteracy is low in Bohemia, higher in Slovakia, and probably less than 2% for the whole country. In 1953 there were 9,045 elementary schools with 1,030,000 pupils, 2,745 higher grade schools with 473,000 and 304 secondary schools with 80,300. Vocational pupils numbered 113,000. The institutions of higher learning had 42,000 students.

Almost all industrial corporations with more than 500 employees were nationalized in Oct. 1945. All the national resources, public utilities, transport, commercial banks and insurance companies became state property. Other laws enacted April 2, 1948, nationalized all enterprises employing more than 50 as well as concerns of any size operating in key industries.

Distribution of large estates had already been accomplished following World War by the 1919 Land Reform Law.

Sugar beets, wheat, corn and high-grade barley and hops for beer brewing are cultivated in the low-lying areas. In more elevated regions, the cultivation of potatoes, rye and oats predominates. High lands are also used for growing fodder crops or for grazing. In Dec. 1953 there were 3,840,000 cattle, 3,460,000 hogs and 1,110,000 sheep.

The highly developed position of Czech industry is important in foreign trade since output far exceeds domestic needs. Abundance of coal and presence of iron ore give the country a big metallurgical industry. Steel production was unofficially estimated at 4,430,000 metric tons in 1953, pig iron output, at about 2,900,000 tons. The Skoda steel works at Pilsen are one of the largest in Europe.

Other industries are glass, porcelain and pottery making, while large forest are



provide raw material for the timber, paper and cellulose industries. Also highly developed are the textile industries, including cotton, wool, flax and jute production, and the shoe industry. The famous Bat'a shoe factories are at Zlín.

Foreign trade is now a state monopoly managed by government corporations. In 1950 exports totaled U. S. \$800,000,000 and imports, \$653,000,000. Main destinations of exports were the U.S.S.R. 28% and Poland, Rumania, Hungary and Bulgaria 11%. Main sources of imports were the U.S.S.R. 29% and Poland, Rumania, Hungary and Bulgaria 26%. Leading exports were iron and steel manufactures, machinery, textiles, glass and vehicles.

Czech railroads, totaling 8,200 miles in 1948, form a direct connection between the systems of eastern and western Europe, making the country an important communications center. Highway mileage totaled 39,560. Internal waterways and rivers connect Czechoslovakia with the Black Sea and the North Sea.

National budget estimates in recent years (in billions of koruny):

	1952	1953	1954*
Revenue	324.3	435.2	87.8
Expenditure	323.5	430.9	87.6

\* The koruna was revalued May 30, 1953.

**NATURAL FEATURES AND RESOURCES;**  
**CLIMATE.** Czechoslovakia lies athwart the great central European watershed between the Baltic, Black and North Seas. Mountains form several of its boundaries. Many of the valleys are made fertile by the Danube, Elbe and Vltava (Moldau) rivers and their tributaries.

Most important of Czechoslovakia's varied minerals are pit coal and lignite, with the principal coal fields in the Ostrava-Karvinná area, connected with the Polish fields of Upper Silesia. Production for the year 1954 was estimated at 20,200,000 metric tons of hard coal and 35,000,000 tons of lignite.

Production of iron ore in 1954 was about 1,500,000 tons; much ore is imported to meet the demands of Czechoslovakia's flourishing iron and steel industry. Excellent porcelain raw materials, particularly kaolin, are obtained in western Bohemia and southern Moravia. Other minerals are antimony, gold, magnesite, oil, uranium, silver and zinc.

Czechoslovakia is one-third wooded and is one of the richest forest lands in Europe, with a high production of lumber.

At Prague, in Bohemia, the average annual temperature is 48.2° (29.6° in January; 66.2° in July) and the average annual rainfall is 19.6 inches. The corresponding figures for Presov, in eastern Slovakia, are 68° and 25.6 inches.

## Denmark (Kingdom)

### (Kongeriget Danmark)

Area: 16,577 square miles.

Population (est. Jan. 1, 1956): 4,452,000 (almost entirely Danish).

Density per square mile: 268.6.

Sovereign: King Frederick IX.

Prime Minister: H. C. Hansen.

Principal cities (est. 1956): Copenhagen, including suburbs, 957,300 (capital); Aarhus, 118,900 (shipbuilding); Odense, 106,000 (meat, dairy products); Aalborg, 98,900 (seaport).

Monetary unit: Krone.

Language: Danish.

Religion: Evangelical Lutheran (state).

**HISTORY.** A tiny nation, Denmark once was powerful and feared. After conversion of the Danes to Christianity in the 9th and 10th centuries, Canute the Great, King of Denmark, conquered England in 1015. In the 12th and 13th centuries, under Kings Valdemar I and II, Denmark reached the zenith of its power. By the terms of the Union of Kalmar in 1397, the nation was united with Norway and Sweden. Sweden left the Union in 1520, but Denmark and Norway remained united until 1814. In the Napoleonic Wars Denmark picked the wrong side; when Napoleon was defeated, Norway was given to Sweden and Helgoland to Britain in 1814. Denmark lost again in 1864 when, after a war with Austria and Prussia, it lost Holstein, Schleswig and Lauenburg to Prussia.

The country, which had become a liberal constitutional monarchy in 1849, stayed neutral in World War I, after which a plebiscite returned to it a part of North Schleswig. In 1917 Denmark sold the Virgin Islands to the United States for the price of \$25,000,000.

On May 31, 1939, eager for peace, Denmark signed a 10-year nonaggression pact with Germany. Less than a year later, on April 9, 1940, Germany invaded neutral Denmark. The British countered by occupying the Faeroe Islands and Iceland. Iceland declared its complete independence from Denmark in 1944, thus breaking a union which had existed since 1380.

To save the country from destruction, King Christian X accepted the German occupation without armed resistance, and the Danish policy became one of passive resistance against Hitler's attempts to form a "model protectorate." During 1944-45, the Danish underground became increasingly active and effective.

Following the German surrender in 1945, the Danes quickly took over their government again with Social Democrat Vilhelm Buhl as Prime Minister. Buhl resigned when his party lost ground in the national elections of Oct. 30, 1945, and Knud Kristensen formed a new all-Liberal Cabinet in Nov. 1945. He lost the confidence of the

Folketing in Oct. 1947, and, after elections in which the Social Democrats increased their plurality, Hans Hedtoft was named Prime Minister on Nov. 11, 1947. His party won the largest block of seats in the September 1950 elections but was forced to yield the next month to a Liberal-Conservative Cabinet headed by Erik Eriksen, a Liberal. Hedtoft returned to office in Sept. 1953, with an all-Social Democrat Cabinet. Upon his death in Jan. 1955, H. C. Hansen became Prime Minister.

**RULER.** Frederick IX, of the house of Schleswig-Holstein-Sonderburg-Glücksburg, born March 11, 1899, became King April 20, 1947. In 1935 he married Princess Ingrid of Sweden, by whom he has three daughters: Margrethe (heiress apparent, born April 16, 1940), Benedikte (born 1944), Anne-Marie (b. 1946). The King's uncle is King Haakon VII of Norway.

**GOVERNMENT AND DEFENSE.** Under the Constitution of 1953, Denmark is a hereditary monarchy. Legislative power rests jointly with the King and the unicameral Folketing of 179 popularly-elected members, two of whom represent the Faeroes and two Greenland. The Folketing is elected for four years but is subject to earlier dissolution by the King. The Constitution authorizes the transfer of some sovereign powers to international organizations under certain circumstances. The Cabinet, presided over by the King, who designates the Prime Minister, is the highest executive power, handling new bills and important measures.

The lineup in the Folketing (elections of Sept. 22, 1953), was Social Democrat 74, Agrarian Liberal 42, Conservative 30, Radical Liberal 14, Communist 8, others 11.

Military service is compulsory. The army, numbering about 12,000, has been re-equipped with British assistance. The navy has 10 frigates and escort vessels, 3 submarines and several patrol vessels and smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.** Under the Danish system, schooling is compulsory from 7 to 14 and, for the most part, free. The famous popular high schools (*folkehøjskoler*) for adults number 55, all private but assisted by the state. The Royal University of Copenhagen, founded in 1479, has about 5,700 students and that of Aarhus, about 1,550. Elementary, middle and secondary schools had 582,555 students in 1953. Illiteracy is practically unknown.

Social legislation is well advanced and provides for medical aid, poor relief, child welfare and workmen's compensation. The National Insurance Act requires everyone from 21 to 60 to belong to an approved sickness benefit society, to which the state also contributes. The co-operative movement is also well organized.

Approximately ninety per cent of the land is productive and about three-quarters is actually farmed. Agrarian reform laws have operated to bring about a large number of small holdings. About two-fifths of the cultivated area is devoted to cereals led by barley, mixed grain, oats, rye and wheat. Root crops (fodder), potatoes and sugar beets also are important. The principal source of exports and of the national wealth is dairy farming and the production of bacon and pork (1955: 531,700 metric tons), butter (165,200 tons), beef and veal (227,400 tons), eggs (142,300 tons), cheese (87,700 tons) and milk (5,135,000 tons). Livestock in 1955: 3,178,000 cattle, 4,607,000 hogs, 23,198,000 poultry.

Denmark produces primarily for home consumption, though some industrial products, such as Diesel motors, are large exports. The largest industries are food processing and iron and metal. Others include chemicals and pharmaceuticals, wood and paper, clothing, textiles, machinery, beverages and leather.

Trade statistics, in millions of kroner:

	1953	1954	1955*
Exports	6,100	6,550	7,190
Imports	6,880	8,034	8,100

\* Preliminary.

Leading suppliers in 1955 were Great Britain (26%), western Germany (19%), Sweden (9%) and the U. S. (8%). Chief customers were Great Britain (33%), western Germany (17%), the U. S. (7%) and Sweden (7%). Leading exports were meat and products (27%), dairy products, largely butter and eggs (24%), machinery (12%) and live meat animals (6%). Leading imports included coal, coke, petroleum and products, machinery, vehicles and textiles.

The Danish merchant marine, one of the largest in the world on a per-capita basis, had 680 ships (100 tons and over) of 1,651,686 gross tons on June 30, 1955, according to *Lloyd's Register*. Regular communications with foreign countries are maintained westward by sea. There are ferry services from Copenhagen to Malmö, Sweden, and from Helsingör (Elsinore) to Hålsingborg.

The main land route to the rest of the continent is the railway via Padborg and Schleswig to Hamburg. Railway mileage totals about 3,050, over half nationalized. Train-ferry services for inter-island communication are highly organized. Motor transport also is well advanced, with about 36,200 miles of roads in 1953.

Recent public-finance data are as follows (in millions of kroner):

	1954-55	1955-56*	1956-57†
Revenue	3,419	4,673	4,700
Expenditure	3,393	4,168	4,300

\* Preliminary. † Budget estimate.

The total state debt on March 31, 1955, was 8,112,000,000 kr.

**NATURAL FEATURES AND RESOURCES:** CLIMATE. Denmark, only three miles from Sweden at the closest point, consists of the Jutland peninsula and the islands in the Baltic. The largest islands are Zealand, the site of Copenhagen; Fünen; and far to the east, Bornholm. The narrow waters to the north are called Skagerrak; and to the east, Kattegat.

The terrain of the whole kingdom is low but not flat. Its highest point is about 500 feet, and there are many lakes, ponds and short rivers. Sand dunes line the western outland coast almost without a break.

Mineral resources are negligible, although some granite and some kaolin are found in the island of Bornholm. Large quantities of coal and coke must be imported. Peat bogs supply an important source of fuel. Forest resources are unimportant.

The fishing industry, centered at Copenhagen but carried on also in the shallow fjords and in the deeper waters of the Baltic, North Sea and Skagerrak, is a basic part of the Danish economy. The 1955 catch of about 417,000 metric tons was valued at 252,000,000 kr.

Denmark's climate is like that of eastern England, but with colder winters and warmer summers. The average annual temperature is 45.2° (61° in July; 32° in January). Average rainfall is 24 inches.

## Outlying Territories

**FAEROE ISLANDS**—Status: Autonomous part of Denmark.

Area: 540 square miles.  
Population (est. 1954): 33,000.  
Capital: Thorshavn (pop. 1950: 5,607).  
Governor general: C. A. Vagn-Hansen.  
Principal products: cod, whale oil, cod liver oil, wool, fertilizers, skins and leather.

This group of 21 islands, lying in the North Atlantic about 200 miles northwest of the Shetland Islands, joined Denmark in 1386 and has since been part of the Danish kingdom. The islands were occupied by British troops during World War I, after the German occupation of Denmark. The principal pursuits are fishing and sheep grazing. The Faeroes have home rule under a bill enacted in 1948; they also have two representatives in the Danish Folketing.

**GREENLAND**—Status: Integral part of kingdom of Denmark.

Area: 839,782 square miles (almost 85 per cent glacier).  
Population (census 1951): 24,159 (native except for 1,269 Europeans).  
Capital: Godthaab (second governor's seat, Godhavn).  
Governor general: Poul Hugo Lundsteen.  
Foreign trade (1954): exports, 40,108,000 kr. (87% to Denmark); imports, 68,813,000

kr. (92% from Denmark). Chief exports: cryolite (69%—55,532 metric tons), fish and products, hides and skins.

Greenland, the world's largest island, was colonized in 985–86 by Eric the Red. Danish sovereignty, which covered only the west coast, was extended over the whole island in 1917. In 1941 the United States signed an agreement with the Danish minister in Washington, placing it under U. S. protection during World War II but maintaining Danish sovereignty. A definitive agreement for the joint defense of Greenland within the framework of NATO was signed on April 27, 1951. A large U. S. air base at Thule in the far north was completed in 1953.

Under 1953 amendments to the Danish Constitution, Greenland is part of Denmark and has two representatives in the Danish Folketing. There is a popularly elected council.

Greenland is the world's only source of natural cryolite, important in the manufacture of aluminum. Large deposits of lead, zinc and wolfram were found on the eastern coast of Greenland during the years 1948–52.

## Dominican Republic (República Dominicana)

Area: 18,703 square miles.  
Population (est. 1955): 2,404,000 (1950: mestizo and mulatto, 60%; white, 28%; Negro, 12%).

Density per square mile: 128.5.  
President: Héctor Trujillo y Molina.  
Principal cities (census 1950): Ciudad Trujillo, 181,553 (capital; sugar); Santiago de los Caballeros, 56,558 (tobacco); San Pedro de Macoris, 19,876 (sugar port); Puerto Plata, 14,843 (seaport).  
Monetary unit: Dominican peso.  
Language: Spanish.  
Religion: Roman Catholic.

**HISTORY AND GOVERNMENT.** The Dominican Republic (formerly San Domingo) occupies the eastern two-thirds of the island which Columbus named La Española (now Hispaniola) when he discovered it on his first voyage in 1492. The other third is occupied by the republic of Haiti. The capital, Ciudad Trujillo, founded in 1496, is the oldest white settlement in the Western Hemisphere.

The Dominican Republic was variously under Spanish, French and Haitian domination until it established its independence in 1865 and then plunged into an unstable political history. U. S. Marines occupied it from 1916 to 1924, when a new Constitution was adopted. In 1930, Rafael Leónidas Trujillo y Molina, an army general, was elected President. In office most of the time during the succeeding 22 years, he brought about improved irrigation,



roads, sanitation and schools. His brother, Héctor, was elected unopposed to succeed him in May 1952.

The President is elected every five years by popular vote in which women take part, and he is eligible to be re-elected indefinitely. The 21-member Senate and the 47-member Chamber of Deputies are also elected for 5 years. Each of the 20 provinces has an appointed Governor.

There is a 12,000-man army and a small air force. The navy has 2 destroyers, 9 frigates and escort vessels and other smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is free and compulsory from 7 to 14. In 1954, there were 2,641 schools with 246,734 students. The University of Santo Domingo had 2,560 enrolled. According to the 1950 census, 56.7% of those 10 years of age and over were illiterate.

Primarily agricultural, the country produces sugar (1954-55: 613,000 metric tons), coffee (442,000 bags of 132 lb. each), cacao (84,024,000 lb.), tobacco, bananas, rice, corn, cassava, beans, sweet potatoes. Cattle raising is of growing importance.

Sugar refining, largely U. S. controlled, is the only important manufacture, although several new industries have been established in recent years.

Foreign trade (in millions of pesos):

	1953	1954	1955
Exports	105.3	119.7	114.8
Imports*	86.5	82.8	99.3

\* Includes duty-free merchandise.

Leading exports in 1955 were sugar (36%), coffee (25%), cacao (15%) and chocolate (6%). Chief customers were the U. S. (53%) and Britain (21%). The main imports, mostly from the U. S., are cotton goods, iron and steel products, chemicals and machinery.

Transit facilities include about 170 miles of public railway, more than 600 miles of sugar plantation railway, and more than 3,000 miles of highway.

The 1955 budget totaled \$108,124,235. The Republic's foreign debt was retired in July, 1947, and the internal debt was retired in 1953.

**NATURAL FEATURES; CLIMATE.** Crossed from northwest to southeast by a mountain range with maximum elevations exceeding 10,000 feet, the country has fertile, well-watered land on the northeast side, where nearly two-thirds of the population lives. The southwest part is arid and with poor soil except around Ciudad Trujillo. The country has many good harbors.

There is little range in temperature, with mean January average of 74°, and August average of 81°. The elevated interior is cooler than the coastlands. Rainfall occurs for the most part from May to November

## Ecuador (Republic) (República del Ecuador)

Area: 105,743 square miles.

Population (est. 1954): 3,567,000 (1942 mestizo, 41%; Indian, 39%; white, 10%; Negro, 5%; others, 5%).

Density per square mile: 33.7.

President: Camillo Ponce Enríquez.

Principal cities (census 1950): Guayaquil 258,966 (chief port); Quito, 209,932 (capital); Cuenca, 39,983 (trading center); Ambato, 31,312 (commercial center).

Monetary unit: Sucre.

Languages: Spanish, Quéchua.

Religion: Roman Catholic.

**HISTORY.** Mostly forested and mountainous and a little larger than Colorado, Ecuador has a long history replete with the forceful rule of dictators. The Spaniards under Francisco Pizarro conquered the land in 1532 by defeating the Inca Atahualpa. The first revolt against Spain occurred in 1809, but the victory was not complete until the Battle of Pichincha on May 24, 1822. Ecuador then joined Venezuela and Colombia in a confederation founded by Simón Bolívar and known as Colombia, but withdrew amicably and became independent in 1830. The country's subsequent history has been largely one of dictatorships, notably under Juan José Flores, Gabriel García Moreno and Elías Alfaro. Since 1900, administrations have fallen, usually by force, on the average every two years. Shortly before the 1946 elections, President Carlos Arroyo del Río was forcibly replaced by José Velasco Ibarra, recalled from exile in Colombia. Velasco Ibarra, confirmed in office by the voters later in the year, followed the old pattern by assuming the role of dictator in 1946 and suppressing opposition.

Velasco was deposed in Aug. 1947, after three weeks of confusion. Carlos Julio Arosemena took over as provisional President until Sept. 1, 1948, when Galo Plaza Lasso, victor in the June 6 elections, took office. Velasco was returned to office in the June 1952 elections.

For more than a hundred years, Ecuador disputed its boundary with Peru, frequently resorting to arms. After hostilities started again in 1941, both nations submitted to mediation, and in 1944 Ecuador lost most of the disputed area. The dispute broke out anew in 1951.

**GOVERNMENT AND DEFENSE.** Under the 1946 (16th) Constitution, Ecuador elects President for four years by direct vote, and he is ineligible for further service until at least one term intervenes. The Congress is bicameral, with a Senate and Chamber of Deputies. There are 18 provinces, including the Galápagos Islands (3,029 sq. mi.), 600 miles off the coast.

Military service is compulsory at eighteen. The army numbers 10,000 and 40,000.

erves. The navy has 3 frigates, a raining ship and several smaller craft. There is an aviation school at Guayaquil and also a naval school at Salinas.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is free, compulsory and under state control, but illiteracy is very high—3.7% (10 years of age and over) according to the 1950 census. In 1952 there were 1,706 primary schools with 352,396 pupils and 182 secondary schools with 32,390. There are universities at Quito (2), Guayaquil and Cuenca, and a law school at Loja.

Although agriculture is the basis of Ecuador's economy, less than 12,000,000 acres are devoted to it. Cacao, the chief crop 1954-55: 25,200 metric tons), is grown in coastal regions and lower river valleys, along with rice, sugar cane, coffee, bananas, tobacco and cotton. The plateaus and mountain valleys are used for grazing and dairying, and raising cereals and potatoes. After textiles, one of Ecuador's main industries is the manufacture of Panama hats, made of Toquilla straw.

Foreign trade (in millions of sucres):

	1953	1954*	1955*
Exports	1,122.4	1,518.5	1,339.9
Imports	951.0	1,550.0	1,344.9

\* Provisional.

Chief exports in 1954 were cacao (35%), bananas (28%), coffee (27%) and toquilla hats (2%). Leading customers were the U. S. (65%), Colombia (8%) and Denmark (7%); leading suppliers, the U. S. (53%), Germany (11%) and Belgium (6%).

Railway mileage in operation in 1949 was 98, all nationalized. The principal road connects the chief port, Guayaquil, with Quito. Highway mileage in 1951 was 6,143, of which 2,943 mi. were paved.

In 1954 government revenue totaled 31,106,000 sucres; expenditure, 647,032,000 sucres. On June 30, 1955, the foreign debt was \$36,208,000; internal debt, 294,49,000 sucres.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Two high and parallel ranges of the Andes, traversing Ecuador from north to south, are topped by tall volcanic peaks. The region between the mountains and the coast is hot and swampy.

Ecuador produced 18,479 troy oz. of gold and 35,100 oz. of silver in 1954. Copper and lead are also mined. In 1954, 3,146,430 barrels of petroleum were produced. The country is the world's chief source of light, strong balsa wood, and exported 918 metric tons in 1955. Exports of rubber reached a high of 3,035 metric tons in 1943; but no exports were reported in 1953 or 1954. Dyewood, cinchona bark, kapok, vegetable ivory are produced.

Though Ecuador, as its name implies, lies on the equator, its climate ranges from

tropical and temperate to the Arctic conditions of its snow-capped peaks. Temperatures on the coast average 83°; on the Andean plateau, about 46° to 70°. The rainy season extends from December through April or May.

## Egypt (Republic)

(Misr)

Area: 386,100 square miles.  
Population (est. 1955): 23,240,000 (1944: Egyptian, 95.4%; Arabian, 1.7%; Greek, .6%; others, 2.3%).

Density per square mile: 60.2.  
President: Gamal Abdel Nasser.  
Principal cities (est. 1952): Cairo, 2,367,900 (capital); Alexandria, 1,070,000 (chief port); Port Said, 186,300 (Suez Canal terminus); Tanta, 147,800 (railroad center, Nile delta).

Monetary unit: Egyptian pound (£E).  
Language: Arabic.  
Religions: Mohammedan, 91%; Christian (mostly Copt and Greek Orthodox), 8%; others, 1%.

**HISTORY.** Egypt, half again the size of Texas, and the largest and most influential of the Arab states, has been an object of big-power controversy for centuries.

Egyptian history dates back to about 4000 B.C., when the kingdoms of upper and lower Egypt, already highly civilized, were united. Egypt's "Golden Age" coincided with the 18th and 19th dynasties (16th to 13th centuries B.C.), during which the empire was established. Persia conquered Egypt in 525 B.C.; Alexander the Great subdued it in 332 B.C., and then the dynasty of the Ptolemies ruled the land until 30 B.C., when Cleopatra, last of the line, committed suicide and Egypt became a Roman province. From 641 to 1517 the Arab Caliphs ruled Egypt, and then the Turks took it and made it part of their Ottoman Empire. Napoleon's armies occupied the country from 1798 to 1801. In 1805, Mohammed Ali, leader of a band of Albanian soldiers, became Pasha of Egypt. After completion of the Suez Canal in 1869, both the French and British took increasing interest in Egypt.

British troops occupied Egypt in 1882, and British Resident Agents became its actual administrators, though it remained under nominal Turkish sovereignty. On Dec. 18, 1914, this fiction was ended and Egypt became a British protectorate.

Pressure by Egyptian nationalists forced Britain to declare Egypt an independent, sovereign state on Feb. 28, 1922, although the British reserved rights for the protection of the Suez Canal and the defense of Egypt. On Aug. 26, 1936, by an Anglo-Egyptian treaty of alliance, all British troops and officials were to be withdrawn, except from the Suez Canal zone. When World War II started, Egypt remained

neutral. But it early became a strategic base for Allied forces, both because of its key location for countering German offenses in North Africa and because of the vital importance of the Suez Canal. British imperial troops finally ended the Nazi threat to Suez in 1942 in the battle of El Alamein, which took place west of Alexandria.

British troops were evacuated from Cairo and Alexandria in 1946, but Anglo-Egyptian negotiations for revision of the 1936 treaty broke down after British refusal to recognize Egyptian sovereignty over the Anglo-Egyptian Sudan.

In Oct. 1951, Egypt abrogated the 1936 treaty and the 1899 agreement on the Sudan. Rioting and attacks on British troops in the Suez Canal zone followed, reaching a climax in Jan. 1952.

The army, led by Gen. Mohammed Naguib, seized power on July 23, 1952. On July 26, King Farouk abdicated in favor of his infant son. Naguib took over the premiership on Sept. 7, 1952, and promised far-reaching reforms. The monarchy was abolished and a republic proclaimed on June 18, 1953, with Naguib holding the posts of both provisional President and Premier. He relinquished the latter post on April 18, 1954, to Gamal Abdel Nasser, leader of the ruling military junta. Naguib was deposed by the Cabinet and junta on Nov. 14, 1954.

Nasser was confirmed as President in a popular referendum held on June 23, 1956. He responded to Russian and satellite overtures to provide Egypt with economic and military aid.

**GOVERNMENT AND DEFENSE.** The 1956 Constitution, which was drafted by the military regime and approved by the people in a referendum held on June 23, 1956, provides for a presidential type of republican government. Legislative power is vested in the National Assembly, elected for five years. Executive power is vested in the President, who serves for six years and is nominated by the Assembly and confirmed (or disapproved) by the people in a referendum. He is assisted by a Cabinet of ministers. Political parties are suspended until such time as a law is passed authorizing them. All persons over the age of 18 have the right to vote.

Military service for all Egyptians is compulsory. The Egyptian army, strengthened and modernized during World War II, has about 160,000 men, including police units under military control. The air force has about 150 combat planes, and the navy 2 destroyers, 7 frigates and escort vessels and other smaller craft.

A treaty between Egypt and Britain signed Oct. 19, 1954, required the evacuation of British troops from the Suez

canal zone but provided for the maintenance by civilians of defense installations there and gave Britain the right to reoccupy the zone under certain circumstances. Under this agreement, the last of British forces left the zone on June 14, 1956.

## SOCIAL AND ECONOMIC CONDITIONS

Education is compulsory between the ages of 6 and 12. In 1953-54 there were 7,400 primary schools with 1,493,797 pupils and 595 secondary schools with 361,650 pupils. The University Mosque of el-Azhar in Cairo (founded A.D. 972) is the chief theological seminary of the Moslem world. The University of Cairo (founded 1908), the University of Alexandria (founded 1943), and Ibrahim University (founded 1950) had a total of 45,763 students in 1953-54. Illiteracy is extremely high, being placed at about 74.5% in the latest estimate (1947).

The majority of the people are Sunni Moslems. The Christians are mainly Copts with an admixture of Armenian, Syrian, and Maronite sects. The population divides generally into fellahin (peasantry) and townspeople of the same blood, the Bedouin or nomad Arabs of the desert, and the Berbers, who occupy the Nile valley between Aswan and Dongola. The foreigners are chiefly Greeks (whose main center is Alexandria), French, British and Italians. The density of population in the small inhabited area in the Nile valley and delta (about 13,600 sq. mi.) is far greater than that of either the Netherlands or Belgium.

Agriculture is the chief industry, employing more than half the population. Only about 3.5 per cent (8,600,000 acres) of the total area is arable, and only about 6,000,000 acres are actually under cultivation, almost entirely in the Nile valley and delta. More than half the cultivated area comprises farms of less than 20 acres. Irrigation is indispensable to agriculture; the Aswan reservoir above the first cataract of the Nile holds up to 5,500,000,000 cubic meters of water and the reservoir of Gebel Aulia, in the Sudan, 2,000,000,000 cubic meters. In the delta and in middle Egypt where perennial or canal irrigation is possible, two or three crops a year can be grown. The chief cash crop is cotton, of which Egypt is one of the world's leading producers.

Production statistics for 1954 were as follows: wheat, 1,729,000 metric tons; maize, 1,735,000 tons; rice (paddy), 1,093,000 tons; sugar, 247,000 tons; cotton (lint). (1954-55) 348,000 tons.

Other crops include beans, garden crops, dates and grapes. The pastoral industry is relatively unimportant except to the Bedouins in the eastern desert.



Industry includes sugar refining, cotton ginning, cement manufacture, milling and pottery, soap and perfume making. The Sugar Company of Egypt holds a monopoly on the sugar refining industry.

Foreign trade statistics (in millions of Egyptian pounds) are as follows:

	1953	1954	1955*
Exports	137.3	138.3	140.1
Imports	176.8	160.2	194.1

\*Provisional.

In 1955, Egypt's chief customers were India (9%), France (9%), the U. S. (7%) and Czechoslovakia (6%). Leading suppliers were Britain (13%), the U. S. (12%), western Germany (10%) and France (9%). Leading exports were raw cotton (77%) and rice (5%).

Imports included wheat, petroleum, fertilizers, iron and steel products, textiles and machinery and vehicles.

Navigable throughout its course in Egypt, the Nile is used largely as a means of cheap transport for heavy goods. The principal port is Alexandria. Railways link Cairo and Alexandria with Suez and nearly every town in the delta. According to *Lloyd's Register*, the merchant marine had 68 ships (100 tons and over) aggregating 130,571 gross tons on June 30, 1955. Cairo has a major airport.

Budget estimates for the fiscal year 1956-57 balanced revenue and expenditure at £E326,270,000. The public debt was £E208,000,000 on Feb. 28, 1953.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Egypt, at the northeast corner of Africa, is a very rough square, with the historic Nile flowing northward through its eastern third. On either side of the Nile valley are desert plateaus, spotted with oases. In the north, toward the Mediterranean, plateaus are low, while south of Cairo they rise to a maximum of 1,015 feet above sea level. At the head of the Red Sea, at the northeast corner of Egypt, is the triangular Sinai peninsula, between the Suez Canal and Israel.

The Nile delta starts 100 miles south of the Mediterranean and fans out to a sea front of 155 miles between Alexandria and Port Said. From Cairo north, the Nile branches into many streams, the principal of which are the Damietta and the Rosetta, joined by a network of canals.

The most important minerals are manganese ore (1955: 215,500 metric tons), phosphate (1955: 646,700 tons) and petroleum (1954: 13,300,000 barrels). Gold, iron ochres, nickel, sodium carbonate, sulfate talc and tungsten also are mined.

Egypt has no forests. Total value of fishery products was \$18,665,000 in 1953, representing a catch of 93,861 short tons.

Except for a narrow belt on the Mediterranean, Egypt lies in an almost rainless area, in which high daytime temperatures fall quickly at night. The mean temperature at Cairo varies between 53° in January and 84° in July; at Alexandria, between 57° in January and 81° in July. South of Cairo, pure desert conditions prevail; at Aswan the mean maximum temperature is 118°.

**SUEZ CANAL.** The Suez Canal, in Egyptian territory between the Arabian Desert and the Sinai peninsula, is an artificial waterway about 100 miles long between Port Said on the Mediterranean and Suez on the Red Sea. Construction work, directed by the French engineer Ferdinand de Lesseps, was begun April 25, 1859, and the canal was opened Nov. 17, 1869. The cost was 432,807,882 francs. The concession is held by an Egyptian joint stock company, *Compagnie Universelle du Canal Maritime de Suez*, in which the British government holds 353,504 out of a total of 800,000 shares. The concession was to expire Nov. 17, 1968, but the company was nationalized July 26, 1956, by unilateral action of the Egyptian government.

An agreement signed Mar. 7, 1949, provided for greater Egyptian participation in management and profits. On the board of management of the canal prior to its seizure were 1 Dutch, 1 American, 5 Egyptian, 16 French and 9 British directors.

#### SUEZ CANAL STATISTICS

Year	Ships	Net Tonnage	Receipts
1951	11,694	80,356,338	£E26,160,000
1952	12,168	86,137,037	£E26,729,900
1953	12,731	92,905,439	£E28,901,200
1954	13,215	102,493,851	£E30,338,000
1955	14,666	115,756,398	£E32,176,600

In 1955, 28.3% of the tonnage was British, 13.5% Norwegian, 12.1% Liberian, 9.3% French and 8.0% Italian. Over 60% of the goods traffic consisted of crude petroleum and petroleum products.

## Estonia

Area: 18,357 square miles.

Population (est. 1940): 1,126,415 (Estonians, 88%; Russians, 9%; Germans [Balt], 1%; others, 2%); (est. 1950): 1,200,000.

Density per square mile: 61.4.

Principal cities (est. 1938): Tallinn, 146,400 (capital); Tartu, 60,100 (university town); Narva, 24,200 (seaport).

Language: Estonian (Finno-Ugrian).

Religions: Lutheran, 78%; Greek Orthodox, 19%; others, 3%.

Born out of World War I, this small Baltic state enjoyed two short decades of independence before it was absorbed again by its powerful neighbor, Russia. In the thirteenth century, the Estonians had been

conquered by the Teutonic Knights of Germany, who reduced them to serfdom. In 1521, the Swedes took over, and the power of the German (Balt) landowning class was curbed somewhat. But after 1721, when Russia succeeded Sweden as the ruling power, the Estonians were subjected to a double bondage—the Balts and the tsarist officials. The oppression lasted until the closing months of World War I, when Estonia finally achieved independence.

Shortly after the start of World War II, the nation was occupied by Russian troops and was incorporated as the 16th republic of the U.S.S.R. in 1940. Germany occupied the nation from 1941 to 1944, when it was retaken by the Russians. Most of the nations of the world, including the U. S. and Great Britain, have not recognized the Soviet incorporation of Estonia.

## Ethiopia (Kingdom)

### (Abyssinia)

Area: 409,266 square miles.\*

Population (est. 1951): 15,000,000\* (Abyssinian [Amhara], 20%; Galla, 50%; others, 30%).

Density per square mile: 36.7.\*

Ruler: Emperor Haile Selassie I.

Prime Minister: Bitwoded Makonnen Endalkatchau.

Principal cities (est. 1951): Addis Ababa, 400,000 (capital); Harar, 45,000 (coffee); Dessie, 35,000 (grain center); Dire Dawa, 30,000 (railway workshops).

Monetary unit: Ethiopian paper dollar.

Languages: Amharic, Arabic.

Religions: Copt (Christian), Mohammedan.

\* Excluding Eritrea.

**HISTORY.** The historic origins of the Ethiopian state are unknown, but the royal family traces its origin (about 1,000 B.C.) to the Queen of Sheba and to Menelek, King Solomon's first son. Christianity was introduced about A.D. 330, and after the Arab conquest of northern Africa in the 7th century, Ethiopia was more or less cut off from the outside world for a thousand years. When Theodore III proclaimed himself Emperor in 1853, the country was a conglomeration of autonomous provinces under hereditary chiefs who were usually at war with one another. Menelek II, who ascended the throne in 1889, brought Ethiopia under single rule, and his forces finished off a five-year Italian attempt at invasion with a great massacre at Aduwa on March 1, 1896. Thereafter, Ethiopia moved in the orbit of England and France.

The defeat at Aduwa was not forgotten by Italy, which, after creating fake border incidents, invaded Ethiopia on Oct. 3, 1935, despite the threat of League of Nations sanctions. Addis Ababa fell on May 5, 1936, and Ethiopia was amalgamated with Italian

Somaliland and Eritrea into Italian East Africa.

World War II brought early liberation; Ethiopia, in fact, was the first of the Axis-occupied nations to be retaken by the Allies. British and Ethiopian troops reconquered the country in 1941, with the final Italian surrender occurring on Nov. 27. During a transition period thereafter, the nation was under dual Anglo-Ethiopian control. Under an agreement signed on Jan. 31, 1942, British troops quit the country except for stipulated border areas. The latter were evacuated in Aug. 1948.

After the war, the country launched a modernization program in agriculture, industry and education. Irredentist claims to the ex-Italian colonies and former Ethiopian provinces, Eritrea and Somaliland, began to be voiced in 1946. In December 1950, the U. N. General Assembly voted to federate Eritrea with Ethiopia under the sovereignty of the Ethiopian Crown. The federation of the two countries became effective on Sept. 15, 1952.

**GOVERNMENT AND DEFENSE.** Emperor Haile Selassie I was born July 17, 1891, crowned King on Oct. 7, 1928, and Emperor on Nov. 2, 1930. His eldest son, the Crown Prince and heir apparent, is Asfa Wassan, born on July 27, 1916. The Emperor directly controls the government, though there now is a Council of Ministers, a Senate, and a Chamber of Deputies. All members are appointed by the monarch, however.

In wartime, military service is compulsory. The small Ethiopian standing army is equipped and trained by a British military mission. A small Ethiopian force was dispatched to Korea in 1951.

**SOCIAL AND ECONOMIC CONDITIONS.** The education system is extremely backward. Foreign missions or the government maintain schools in the principal towns, and several secondary schools have been set up. There were 431 state primary schools with 69,000 pupils in 1953-54, 11 secondary with 2,155. Illiteracy is estimated at 70%. The Coptic Church (Christian), with its numerous priests, exercises powerful influence and owns much Ethiopian land. It became independent of the Coptic Archbishop of Alexandria in 1946. Moslems, numerous in frontier regions, have their religious center at Harar.

Ethiopia is generally fertile, predominantly agricultural and pastoral, with many regions yielding two crops a year. The chief crops are maize, wheat, barley, rye, cotton, sugar cane, millet, hemp, vegetables, coffee and teff (the common bread grain). The country's inadequate transport system, however, makes crop growing largely a local industry.

The country grazes several million cattle, and many goats and sheep. Horses and

mulas are bred extensively as pack animals and mounts. There is little manufacturing except for small native industry, although the Italians built some industrial plants during their five-year occupation.

Recent trade data (for years beginning Dec. 11, in millions of Ethiopian dollars):

	1951-52	1952-53	1953-54
Exports*	106.5	169.4	160.3
Imports	115.2	137.9	160.1

\* Excluding specie.

Chief exports in 1953-54 were coffee (62%), hides and skins (10%) and oilseeds (7%). Leading customers were the U. S. (31%), Aden (27%) and Italy (13%); leading suppliers, Italy (15%), India (15%) and the U. S. (14%). Major imports were cotton piece goods, machinery, sugar and salt.

The 486-mile track from Addis Ababa to Djibouti in French Somaliland is Ethiopia's only rail outlet and its principal trade route. Motorable roads, non-existent until about 1925, now total 9,000 miles.

The 1954-55 budget estimated revenue at Eth.\$108,000,000 and expenditure at Eth.\$108,170,341.

**NATURAL FEATURES AND RESOURCES;** **CLIMATE.** Over its main plateau-land, Ethiopia has several high mountains. Most of the many rivers are rapid, not navigable, and flow into the Nile. The Blue Nile, or Abbai, rises in the northwest and flows in a great semicircle east, south and northwest before entering Sudan. Its chief reservoir, Lake Tana, lies in the northwestern part of the plateau.

Gold, produced from placer mines worked by natives in the south and west, is Ethiopia's main mineral. Platinum also is mined in fair commercial quantities. Other minerals are rock salt, cinnabar, copper, iron, mercury, mica, potash and sulfur. Oil deposits are believed to exist, and all drilling rights have been sold to the Sinclair Refining Company of the U. S.

Ethiopia, lying wholly within the tropics, escapes a torrid climate because of its elevation, although the lowlands are hot. The mean annual range of temperature is between 60° and 80°, although Alpine conditions prevail in the higher mountains. Rainfall at Addis Ababa is about 50 inches annually.

**ERITREA—Status:** Federated with Ethiopia.

Area: 47,875 sq. mi.

Population (est. 1955): 1,104,000.

Capital: Asmara (population: 117,000).

Sovereign: Haile Selassie I.

Chief Executive: Fitaurari Asfaha Wolde-nikaal.

Agricultural products: coffee, barley, tobacco, sesame, hides, skins.

Minerals: gold, salt, potassium salts.

Sea product: pearls.

The first Italian inroad into Eritrea came in 1870 when the port of Assab and adjacent territory were bought from a native sultan; with British approval, Italian troops occupied Massaua in 1885. By a decree of Jan. 1, 1890, Italian possessions along the Red Sea were united into the colony of Eritrea. In 1936 Eritrea became a part of Italian East Africa. British and Indian troops captured Asmara on Apr. 1, 1941, and Massaua a week later; the area, reduced to its pre-1936 borders, then came under British military administration. The U. N. General Assembly on Dec. 2, 1950, adopted a plan for federation of an autonomous Eritrea with Ethiopia under the sovereignty of the Ethiopian Crown, federation becoming effective Sept. 15, 1952.

As an autonomous, self-governing area, Eritrea has its own elected assembly which selects the chief executive. It is also represented in the Ethiopian Parliament. Matters reserved to the Ethiopian government include defense, foreign affairs, foreign trade, finance and communications.

The principal native elements are the Ethiopians and Tigrés, who have close ethnic, linguistic and religious ties with peoples in neighboring Ethiopia. Irrigation is essential in the coastal plains, and agriculture is practiced largely on the interior plateau (average elevation: 6,500 ft.) where the climate is suitable for European settlement.

Along the coast, the climate is excessively hot and humid, especially in June, September and October; mean annual temperature at Massaua is 86°; the thermometer often rises to 120° in summer, and rainfall is less than 8 inches a year.

## Finland (Republic)

(Suomen Tasavalta)

Area: 130,119 square miles.

Population (est. Jan. 1, 1955): 4,248,773 (Finnish, 90%; Swedish, 10%).

Density per square mile: 32.7.

President: Urho Kekkonen.

Premier: Karl-August Fagerholm.

Principal cities (est. Jan. 1, 1955): Helsinki, 403,970 (capital); Turku (Abo), 110,084 (seaport, shipbuilding); Tampere, 109,902 (textiles, paper); Lahti, 48,112 (glass, lumber); Pori, 47,173 (timber).

Monetary unit: Markka (FM).

Languages: Finnish, Swedish.

Religions (1949): Evangelical Lutheran, 97%, Greek Orthodox, 2%; others, 1%.

**HISTORY.** The Finns, a people of possibly Mongolian origin, first settled their Montana-sized area about A.D. 100. King Eric IX of Sweden conquered them about 1155 and introduced Christianity. Under Swedish rule, which lasted for 650 years, the Finns retained considerable autonomy and were given their own parliament in the 17th century.



Political pressure growing out of the Napoleonic Wars forced Sweden in 1809 to cede Finland to Russia, which gave the Finns a Constitution and set them up as a grand duchy. Out of the chaos and complexities of World War I, the Russian revolution of 1917 and a Finnish civil war in 1918 between "Reds" and "Whites" led by Baron Carl G. von Mannerheim, Finland emerged as a republic in 1919. A year later Russia ceded to Finland the Petsamo area with its ice-free Arctic port.

For the next twenty years Finland was generally orderly and prosperous except for vigorous suppression of Communists and a bloodless rightist uprising in 1932. In Nov. 1939, however, Russia attacked Finland to enforce territorial demands. The sturdy Finns stood off large-scale Red Army assaults for 105 days, but finally lost and ceded to Russia 10 per cent of the nation's area, including the Karelian isthmus. Under German pressure and somewhat in a spirit of revenge, the Finns joined the Nazis against Russia in 1941—and lost again.

Baron Mannerheim (who had led Finnish forces in both wars with the U.S.S.R.) became President in 1944, and Finland severed relations with Germany on Sept. 2, signed an armistice and concluded a provisional peace treaty with Britain and Russia, Sept. 19. The U. S. had not declared war on Finland.

Pro-Russian Juho K. Paasikivi became Premier on Nov. 11, 1944, and when Mannerheim resigned because of illness on March 4, 1946, Paasikivi was elected to fill the unexpired term. The premiership went to Mauno Pekkala, leader of the new Socialist Unity party, advocating co-operation with the Communists.

The Communists and their allies lost ground in the July 1948 parliamentary election; and on July 29, Karl August Fagerholm formed a Social Democrat government in which the leftist bloc was not represented. Paasikivi was re-elected for a full 6-year term in Feb. 1950, and on Mar. 17, Fagerholm was succeeded as Premier by Urho Kekkonen at the head of a centrist minority Cabinet. He yielded on Nov. 17, 1953, to Sakari S. Tuomioja. After the Mar. 1954 elections, Swedish party leader Ralf Toerngren formed a coalition Cabinet on May 5, 1954, but Kekkonen took over again on Oct. 20, 1954. Kekkonen was elected President on Feb. 15, 1956, and Fagerholm succeeded him as Premier.

**GOVERNMENT.** Under the 1919 Constitution, the 200 Diet members are popularly elected by a proportional-representation system for three-year terms. The President, normally chosen for six years by an Electoral College of 300 members nominated by the people, acts through his Cabinet headed by the Prime Minister.

Suffrage is universal. Because of the many political parties, government usually is carried on by a coalition, with frequent Cabinet changes.

Party standing in the Diet after the elections of March 1954 was as follows (1951 standings are shown in parentheses): Social Democrats, 54 (53); Agrarian, 53 (51); Communists, 43 (45); Conservatives, 24 (26); Swedish People's party, 13 (15); National, 13 (10).

The Swedish-populated Åland islands (581 sq. mi.) have an autonomous status under a law passed in 1951.

**PEACE TREATY OF 1947.** The final peace treaty became effective Sept. 15, 1947; it confirmed the *de facto* cession to the U.S.S.R. of the Petsamo area, Viipuri and the Karelian region and also of the Porkkala-Udd area west of Helsinki for use as a Soviet naval base. Finland was to pay reparations of \$300,000,000 in kind (reduced to \$225,000,000 by the U.S.S.R. in 1948) over a period of eight years from Sept. 19, 1944. Reparations payments were completed in Sept. 1952. Porkkala was returned to Finland in Jan. 1956.

The treaty limited Finnish defense forces to the following strengths: army, 34,400 personnel; navy, 4,500 personnel and a tonnage of 10,000; and air force, 3,000 personnel and 60 aircraft. The possession of bombers, submarines, atomic weapons and motor torpedo boats is prohibited.

**SOCIAL AND ECONOMIC CONDITIONS.** Illiteracy is very low (less than 1% beyond the age of 15). Education is compulsory from 7 to 15. In 1953-54 there were 6,402 elementary schools with 541,770 students and 345 secondary schools with 114,901 pupils. There are three regular universities, of which Helsinki has the largest enrollment (8,207 in 1953-54).

Only about 3 per cent of the land is under cultivation, and about 5 per cent in grassland. The chief crops (with estimated 1955 production in metric tons) are oats, 643,793; barley, 262,146; rye, 118,733; potatoes, 1,066,891. Grazing lands are extensive. In 1955 there were 1,902,358 cattle, 749,403 sheep, 467,383 hogs and 173,719 reindeer.

The leading Finnish manufactures are wood and paper (about one-third the total value), food, luxury items, machinery and textiles. With the cession of the Karelian isthmus and the city of Viipuri to the U.S.S.R., Finland lost valuable manufacturing areas. Helsinki is the principal industrial center.

Trade statistics are as follows (billions of markkas):

	1953	1954	1955
Exports	131.55	156.62	181.26
Imports	121.86	152.14	176.96

Chief exports in 1955 were wood and wood products (39%), paper and products (23%) and wood pulp (20%). Leading suppliers were Britain (20%), the U.S.S.R. (15%), western Germany (9%) and France (6%). Chief customers were Britain (24%), the U.S.S.R. (18%), western Germany (9%) and the U. S. (6%).

According to *Lloyd's Register*, the merchant marine on June 30, 1955, had 346 ships (100 tons and over) aggregating 730,-573 gross tons. The numerous lakes, many joined by canals, are busy routes used by both ships and timber rafts. There were approximately 39,000 miles of road in 1953. Railway mileage in 1954 totaled 3,136, almost entirely nationalized.

Recent public finance data are as follows (in billions of markkas):

	1954	1955*	1956†
Revenue	215.6	235.4	215.3
Expenditure	213.7	243.0	215.3

\* Preliminary estimate. † Budget estimate.

The total public debt was estimated at 117,300,000,000 FM on Dec. 31, 1955.

**NATURAL FEATURES AND RESOURCES;** CLIMATE. Finland stretches 700 miles from the Gulf of Finland on the south to Soviet Petsamo, north of the Arctic Circle. Off the southwest coast are the Åland Islands (approximately 300), controlling the entrance to the Gulf of Bothnia. Finland has more than 60,000 lakes. Of the few rivers, only the Oulu (Uleä) is navigable to any important extent.

Finland has no coal or oil, and many of its ore deposits are remote from transportation. Finland's sulfide ore (production in 1955: about 2,251,000 metric tons) is 4 per cent copper, 26 per cent sulfur and 27 per cent iron, with some zinc, cobalt, gold and silver. Limestone, soapstone and red granite deposits are extensive, and uranium deposits are believed to exist. Wood and peat are the only natural fuels.

More than a third of Finland is covered with high quality timber, the nation's richest natural resource. Timber production in 1955 was about 1,070,000 standards; cellulose, 1,825,800 metric tons; mechanical pulp, 182,400 tons; paper, 1,011,-900 tons; cardboard, 289,100 tons.

Finnish have fished for centuries, not commercially, but for domestic consumption. The 1955 catch was about 63,000 metric tons valued at 4,700,000,000 FM.

Finland's long severe winters are moderated somewhat along the coast by prevailing southwest winds, but the summer lasts only about two and a half months of the year. Southerly Finnish ports are icebound part of the year. Rainfall is light, with the driest months from May to September.

## France (Republic) (République Française)

Area: 212,736 square miles.

Population (census May 1954): 42,771,-445\* (French, 96.6%; others, 3.4%).

Density per square mile: 201.1.

President: René Coty.

Premier: Guy Mollet.

Principal cities (census 1954): Paris, 2,850,189 (capital); Marseilles, 661,492 (chief port); Lyons, 471,270 (silk, metal manufacture); Toulouse, 268,863 (tobacco; commercial center); Bordeaux, 257,946 (wine; seaport); Nice, 244,360 (resort center); Nantes, 222,790 (manufacturing).

Monetary unit: Franc.

Religion (est.): Roman Catholic, 97.5%; Protestant and others, 2.5%.

\* Excludes servicemen outside France and officials and their families in Austria and Germany.

**HISTORY.** France was ancient Gaul when Caesar conquered a part of it in 57-52 B.C.; for several centuries thereafter it was bound to the Roman Empire. In the 5th century A.D., it was overrun by the Franks and other barbarian tribes. Between 768 and 814, Charlemagne created a Frankish empire covering most of Western Europe, but by the time Hugh Capet came to the throne in 987, his kingdom comprised only the region around Paris. For more than 300 years the Capets struggled to unify the many feudal fiefs.

Philip VI, cousin of the last Capet and first of the House of Valois, took the throne in 1328. Soon thereafter began the Hundred Years' War (1338-1453), the struggle over England's bid to seize the French Crown. The English won at Crécy in 1346 and at Agincourt in 1415, but were defeated at Orléans in 1429 by the French forces led by Joan of Arc. Cruel persecution of French Protestants, the Huguenots, was followed by civil war and then the Edict of Nantes in 1598, by which the Huguenots received complete religious freedom from Henry IV, first of the Bourbons.

Splendor, wealth and the establishment of a colonial empire marked the long reign of Louis XIV from 1643 to 1715. Extravagance, however, forced Louis XVI to struggle with the problem of taxation at a time when the forces of revolution were coming to a head among France's lower and intellectual classes. The French Revolution, of world significance for its impact on absolute rule, broke out in 1789. Louis XVI was deposed in 1792 and executed the next year. Then came the Reign of Terror as the revolution swung to excess, the Directory from 1795 to 1799, and the Consulate from 1799 to 1804, after which Napoleon was proclaimed Emperor. Meanwhile, French armies were engaged on all sides, spreading French hegemony over most of western and central Europe. The final downfall came at Waterloo on June 18, 1815.



The restored Bourbon, Louis XVIII, reigned until 1824 and was succeeded by his reactionary brother, Charles X, who was overthrown in the revolution of 1830. His successor, Louis Philippe, was unseated in 1848, and succeeded by Napoleon's nephew, Louis. Inaugurated President of the Second Republic in 1848, Louis Napoleon became Emperor as Napoleon III in 1852 but abdicated after France's defeat in the Franco-Prussian War of 1870-71. The resultant conflict between republicans and monarchists was resolved by the adoption of a republican Constitution in 1875, which established the Third Republic to replace the provisional republic set up in 1871.

Victorious with the Allies in World War I under Premier Georges Clemenceau, France emerged as the dominant power on the continent. From 1919 on, its aim was to keep Germany weak through a system of military alliances and by maintaining a strong French army.

The effort was a dismal failure. At home France was weakened by economic and political instability, with many short-lived Cabinets. Germany became a dictatorship, with the full national energy bent toward war. The Third French Republic, permitting political freedom, bickered and argued away its years. The leftist "Popular Front" coalition Cabinets of Léon Blum (1936-47) and Camille Chautemps (1937-38) were succeeded by the Radical and Radical-Socialist Cabinet under Edouard Daladier, one of the men of Munich.

Paul Reynaud took Daladier's place on March 21, 1940, less than seven months after the start of World War II. In May 1940, Hitler's armies finally poured into France; and on June 16, the reins of government fell to Marshal Henri Philippe Pétain, who opposed continuation of the war. An armistice with Germany was signed June 22, dividing France into occupied and unoccupied zones. The Third Republic was voted out of existence on July 10 by the National Assembly at Vichy, and Unoccupied (Vichy) France became totalitarian, with Pétain as Chief of State.

Meanwhile, in London, General Charles de Gaulle had formed on June 18, 1940, a provisional French National Committee, which received British recognition and represented the interests of free Frenchmen. De Gaulle's government-in-exile was moved to Algiers in June 1943 as the French Committee for National Liberation.

After the liberation of Paris, De Gaulle formed a provisional government in the capital on Sept. 10, 1944. It remained in power as a theoretically nonpolitical regime until the elections of Oct. 21, 1945, when a National Assembly was selected to draw up a new Constitution and serve as an interim legislative body. De Gaulle was

named provisional President on Nov. 13 but resigned soon after and was succeeded by Félix Gouin, a Socialist, Jan. 23, 1946.

A new Constitution was approved by a slim margin Oct. 13, and the Fourth Republic formally took shape early in 1947 with the election of Socialist Vincent Auriol as President, Jan. 16, and the confirmation of Socialist Paul Ramadier as Premier, Jan. 22.

The ensuing years were marked by a parade of short-lived multiparty Cabinets reflecting the basic French political instability. In the 1951 National Assembly elections, De Gaulle's supporters emerged as the strongest single party; its gains were largely at the expense of the centrist coalition, which had furnished most of the Cabinets since 1946. René Coty was elected President of the republic on Dec. 17, 1953, to succeed Vincent Auriol.

Edgar Faure, who formed France's 21st post-liberation Cabinet on Feb. 23, 1955, used a rarely-invoked procedure to force dissolution of the Assembly on Nov. 30, 1955. In new elections held Jan. 2, 1956, leftist and rightist extremists scored important victories. Socialist Guy Mollet formed a left-of-center coalition Cabinet on Feb. 1.

**GOVERNMENT AND DEFENSE.** Under the Constitution of 1946, France is a secular, democratic and social republic. The dominant power in the new republic is the National Assembly, whose 627 members are elected for 5 years by universal direct suffrage. There is also a Council of the Republic of 320 members elected by a complicated indirect procedure requiring 8 different elections. This house has only advisory and delaying powers and is definitely subordinate to the Assembly. The two houses together elect the President of the republic for a 7-year term, but his choice of a Premier and the latter's choice of Cabinet ministers require Assembly ratification. All ministers are collectively responsible to the Assembly for the general policy of the Cabinet and are individually responsible for their personal actions. Communists have been excluded from the government since April 30, 1947.

The Assembly elections of Jan. 2, 1956, divided the 627 seats as follows: Communists and affiliates 150; Conservatives (*Paysans*) and affiliates 95; Socialists 94; Popular Republicans 73; Radical Socialists and affiliates 57; French Brotherhood (Poujadists) and affiliates 52; Gaullists and affiliates 21; others 53; vacancies and elections pending 32. Several of the Poujadists were subsequently disqualified.

**GOVERNMENT OF OVERSEAS TERRITORIES.** The French Constitution of 1946 provided for establishment of the French Union, consisting of the French Republic



## FRANCE AND THE FRENCH UNION

Political subdivision	Area (sq. mi.)	Population	Political subdivision	Area (sq. mi.)	Population
France	212,736	42,774,445 <sup>4</sup>	Sénégal	80,617	2,158,000 <sup>4</sup>
Africa			Madagascar and dependencies	230,165	4,540,400 <sup>3</sup>
Algeria	846,124	9,531,000 <sup>4</sup>	Réunion	969	274,370 <sup>4</sup>
Cameroon	166,793	3,121,000 <sup>3</sup>	Togo	21,135	1,070,000 <sup>5</sup>
Comoro archipelago	832	170,046 <sup>4</sup>	Western Hemisphere		
French Equatorial Africa	969,111	4,492,000 <sup>3</sup>	French Guiana	35,135	27,863 <sup>4</sup>
Chad	495,752	2,304,000 <sup>3</sup>	Guadeloupe	687	229,120 <sup>4</sup>
Gabon	103,089	413,000 <sup>2</sup>	Martinique	425	239,130 <sup>4</sup>
Middle Congo	132,046	693,000 <sup>2</sup>	St. Pierre and Miquelon	93	4,606 <sup>2</sup>
Ubangi-Shari	238,224	1,082,000 <sup>3</sup>	Asia		
French Somaliland	8,494	65,000 <sup>4</sup>	Laos	91,500	1,260,000 <sup>3</sup>
French West Africa	1,831,079	17,726,000 <sup>4</sup>	Vietnam (south)	64,451	12,000,000 <sup>5</sup>
Dahomey	43,784	1,549,000 <sup>4</sup>	Oceania		
French Guinea	106,216	2,262,000 <sup>4</sup>	French Pacific Settle- ments	1,545	63,000 <sup>3</sup>
French Sudan	460,540	3,461,000 <sup>4</sup>	New Caledonia and dependencies	7,654	63,000 <sup>3</sup>
Haute Volta	105,946	3,200,000 <sup>4</sup>	New Hebrides	5,700	53,000 <sup>3</sup>
Ivory Coast	123,282	2,309,000 <sup>4</sup>			
Mauritania	416,061	560,000 <sup>4</sup>			
Niger	494,633	2,227,000 <sup>4</sup>			

(Note: Each population figure is followed by a superior number denoting the year of estimate or census: <sup>3</sup> for 1955, <sup>4</sup> for 1954, <sup>2</sup> for 1953, <sup>2</sup> for 1952, <sup>1</sup> for 1951.)

metropolitan France and the overseas departments, territories and trusteeships) and the associated territories and states. The overseas departments are Algeria (four departments), Martinique, Guadeloupe, French Guiana and Réunion.

The overseas departments and territories are represented in the National Assembly by 75 deputies and in the Council of the Republic by 65. In addition the Constitution provided for creation of a High Council, consisting of nominees of the French Government and of the associated states, and an Assembly of the French Union, with power that is mainly advisory. The Assembly, which met for the first time on Dec. 10, 1947, consists of 240 delegates, 120 of whom are elected by the French Parliament, 75 by territorial assemblies overseas, and 45 by the associated states.

Article 61 of the Constitution provides that the position within the Union of the associated states—tentatively described as French Morocco, Tunisia and the Federation of Indo-China—is “settled for each of them by the act which defines their relations with France.”

**Defense.** French armed forces in Jan. 1953 (including the gendarmerie) totaled about 836,000 men, largely recruited under a conscription system providing for 18 months of service. The army had 12 divisions totaling about 608,000 men, and the air force 28 squadrons with 103,000 men. The total forces had been reduced to approximately 750,000 by mid-1956.

In Dec. 1955, the navy had 3 light aircraft carriers, 1 escort carrier, 2 battleships,

5 cruisers, 20 destroyers, 54 frigates and escort vessels, 14 submarines and several hundred smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.**  
**Education.** State elementary schools in 1953-54 numbered 70,166 with 4,085,738 students. There were also 10,691 private schools with 888,021 students. Students attending higher elementary schools, state and private, totaled 299,069. Pupils attending state secondary schools totaled 529,879; private, 372,974.

Higher education is provided chiefly in the universities, of which there are 17, with total enrollment of 147,844 in 1953. The University of Paris is largest, with an enrollment of 61,166.

**Religion.** The predominant faith is Roman Catholicism, but Church and State were separated in 1905. Diplomatic relations with the Vatican were resumed in 1921, and lesser church property was returned to diocesan associations in 1924.

**Population.** The people are not homogeneous, varying from section to section. During the inter-bellum period, the population remained almost static, with an increase of only 72,133 from 1931 to 1936 and a decrease of 3.3 per cent from 1936 to 1946. The period between 1946 and 1954 showed an increase of 5.6 per cent. The French birth rate also fell sharply (1925: 19.6; 1936-38 annual average: 14.8), but the end of World War II saw an uptrend, and the rate was estimated at 18.4 in 1955.

**Agriculture.** The national economy of France is predominantly agricultural. Of the total area, approximately 40 per cent

is ordinarily devoted to crops, 20 per cent to forests, 3 per cent to vines and two per cent to market and other gardening. The vast majority of holdings are small farms worked by the owners. France normally is almost self-sufficient in basic foodstuffs and leads the world in wine production.

Recent production estimates for major crops are as follows (thousands of metric tons):

	1953	1954	1955
Wheat	8,981	10,566	10,379
Rye	467	514	439
Barley	2,239	2,525	2,665
Oats	3,663	3,574	3,580
Potatoes	12,278	14,940	16,986
Sugar beets	10,000	10,950	9,800

Other important crops are berries, fodder beets, fruits, hay, nuts and turnips. Silk culture once thrived in the lower Rhône valley, but production fell sharply between wars. Milk, butter and cheese are important as exports. Livestock in Oct. 1955 included 17,560,000 cattle, 8,191,000 sheep and 7,772,000 hogs. Wine production in 1955 was estimated at 1,493,000,000 U. S. gallons (preliminary).

**Industry.** Principal industrial areas are Paris, Artois, Lower Seine and Lyon; the textile industry is concentrated in the north. Leading manufactures are iron, steel, chemicals, textiles, automobiles, machinery and beet sugar. Industrial production in 1955 was estimated at 120% of the 1953 level.

### FRENCH INDUSTRIAL PRODUCTION

Monthly averages, 1954 and 1955,  
in metric tons

Product	1954	1955
Pig iron and ferroalloys	745,000	914,000
Crude steel	886,000	1,049,000
Cement	796,000	897,000
Cotton yarn	24,600	22,100
Wool yarn	10,700	10,700
Rayon yarn	4,450	4,570
Electricity	3,564*	3,889*
Manufactured gas	216†	208†
Automobiles	36,420‡	46,110‡

\* Millions of kwh. † Millions of cu. m. ‡ Units.

**Trade.** Foreign trade statistics, in billions of francs, including the Saar:

	1953	1954	1955
Exports	1,324	1,466	1,696
Imports	1,380	1,475	1,656

Principal suppliers in 1955 were the French Union (25%), the U. S. (10%), western Germany (9%), Belgium (5%) and Iraq (5%). Leading customers were the French Union (32%), western Germany (10%), Britain (7%), Belgium (7%) and Switzerland. Leading exports were metals and manufactures, textiles and agricultural and food products.

**Communications.** The French merchant marine had 1,220 ships (100 tons and over) aggregating 3,922,478 gross tons on Jan. 30, 1955, according to *Lloyd's Register*—fifth largest in the world on that date.

There are about 5,500 miles of navigable waterways, including canals, with a total of 42,075,000 metric tons in 1953. There are approximately 550 inland navigation ports of which Paris, Rouen and Strasbourg each normally handle more than one million tons annually (Paris, more than ten million tons). Railway mileage in 1954 totaled 25,600. Railroads were merged in 1938 into the *Société Nationale des Chemins de Fer Français*, of which the government acquired controlling interest. Highway mileage in 1952 was 410,000, including 50,000 miles of national highways. Telephone lines totaled 2,945,564 on Jan. 1, 1955. Air transport, nationalized on Jan. 1, 1946, operates on a world-wide basis.

**Finance.** France's postwar financial position was extremely unstable. Recent data are as follows (in billions of francs):

	1953	1954	1955
Revenue	3,020	3,278	3,000
Expenditure	3,387	4,051	3,500

\* Revised budget estimate, July 1955.

On Dec. 31, 1954, the franc debt was 4,530,000,000,000 fr. and the foreign currency debt, 1,120,000,000,000 fr.

### NATURAL FEATURES AND RESOURCES

**CLIMATE.** With a maximum length of about 600 miles and a width of 300 miles, France is second in size to Russia among Europe's nations. Its coastline is about 1,950 miles. In the Alps near the Italian and Swiss borders is France's highest point—Mont Blanc, 15,781 feet. The forest-covered Vosges Mountains are in the northeast and the Pyrenees are along the Spanish border. Except for extreme northern France, which is part of the Flanders plain, the country may be described as a river basins and a plateau. Three of the great streams flow west—the Seine into the English Channel, the Loire into the Atlantic and the Garonne into the Bay of Biscay. The Rhône flows south into the Mediterranean. For about a hundred miles, the Rhine is France's eastern border. West of the Rhône and northeast of the Garonne lies the Central Plateau, covering about 20 per cent of France's area, and rising to a maximum elevation of 6,188 feet. In the south, the Mediterranean, 115 miles east-southeast of Nice, is Corsica, the island of Napoleon's birth, with an area of 3,367 square miles.

**Minerals.** French coalfields, most extensive in the northeast, ordinarily supply about 70 per cent of domestic needs. In Lorraine, Anjou and Normandy have valuable iron ore deposits. Provence has bauxite. Alsace has potash and oil. Limousin has kaolin, zinc, lead and tar.

Production in 1955 (excluding the Saar) included coal, 55,330,000 metric tons; iron ore (metal content, 35%), 50,328,000 tons; lead (smelter), 66,600 tons; petroleum, 123,000 barrels; potash ( $K_2O$  content), 351,841 tons.

**Forests and Fisheries.** France, with more than 26,000,000 wooded acres, produces well over \$100,000,000 worth of forest products in a normal year, including resin, turpentine, timber and nuts. The annual fish catch (444,900 metric tons in 1954) is among the largest in Europe. Cod and haddocks are usually the biggest items.

**Climate.** France's climate is temperate but varies from long cold winters and hot summers in the northeast, to the subtropical temperature of the Mediterranean coast with very mild winters. With no high eastern elevations to block moisture-laden winds from the Atlantic, all France has adequate rainfall of 20 to 30 inches a year. The mean annual temperature at Paris is 50.5° (36.5° in January and 65.5° in July). The rainiest months are June and October, with February usually the driest.

## Andorra

This 191-square mile autonomous and semi-independent state on the Franco-Spanish border has been under the joint suzerainty of the French State and the Spanish bishops of Urgel since 1278. It is a cluster of mountain valleys inhabited by about 6,500 hardy and traditionally independent people whose principal pursuit is the tending of flocks. Catalán is the language spoken, and both French and Spanish currency are in use. Andorra is governed by a Council General of 24 members, elected for four years by the heads of families. A First Syndic, chosen by the Council, constitutes the supreme executive authority.

## FRENCH UNION

### AFRICA

## Algeria (Part of Metropolitan France)

### (L'Algérie)

Governor General: Robert Lacoste.  
Principal cities (census 1948): Algiers, 5,210 (capital); Oran, 256,661 (seaport); Constantine, 118,774 (trading center); Bone, 102,823 (seaport; phosphates).  
Monetary unit: French franc.  
Languages: Arabic, French.  
Religions: Mohammedan (natives), Roman Catholic, Jewish.

**STORY.** Algeria, more than three times the size of Texas and situated on the northern bulge of Africa, was of great strategic importance during World War II.

After U. S. and British troops occupied it following the landings of Nov. 8, 1942, it became the headquarters of the provisional French government of General Charles de Gaulle until the summer of 1944. For many months during that period it was the headquarters of the Allied Expeditionary Force.

Algeria became a Roman colony after the fall of Carthage in 146 B.C. and was overrun by the Arabs in the 7th, 11th and 12th centuries. In the 13th century it became one of the three kingdoms founded on the ruins of the old Almohade Empire. Following a brief Spanish occupation, it went under Turkish suzerainty in 1518. For 300 years thereafter, Algiers was the headquarters of the notorious Barbary pirates who preyed on Mediterranean shipping. The French ended Turkish rule by taking Algiers in 1830, but it was not until 1847 that they were able to suppress a holy war instigated in 1839 by Abd-el-Kader.

French policy for a time vacillated between complete assimilation of Algeria as part of France, and a decentralized administration under a Governor General. In 1896 the idea of assimilation was abandoned for a number of years. After France fell in 1940, Algerian government officials were loyal to Vichy, but their control was ended by the Allied invasion of Africa in the fall of 1942.

Outbreaks of anti-French terrorism beginning in 1955 required heavy French troop reinforcements.

**GOVERNMENT.** In effect, Algeria is part of France. Its 12 departments are represented in the French National Assembly, and it is one of the ten military districts of France, with both French and natives subject to military service. The Governor General is responsible to the Interior Ministry in the French Cabinet rather than the Ministry for France Overseas. A statute enacted in Aug. 1947 gave Algeria an elected Legislative Assembly, but leadership of the government still remains with the Governor General.

**SOCIAL AND ECONOMIC CONDITIONS.** Primary and secondary schools for Europeans are on French lines. Most natives do not go beyond the primary grades. The knowledge and use of French has spread widely among the natives, but the teaching of Arabic in all schools was made compulsory in 1946. There is a university at Algiers, with faculties of science, arts, law, medicine and pharmacy.

Approximately 86 per cent of the population is native, 12 per cent French and 2 per cent other European. The native population is Berber, with Arab admixture physically assimilated.

The area under cultivation is about 15,000,000 acres, more than 30 per cent of



which is owned by European farmers, chiefly in the fertile coastlands. The principal crops are wheat, barley and oats. Algeria is a leading wine producer, with almost 7 per cent of the cultivated area devoted to vines. Production in 1955 was 370,000,000 U. S. gallons, about 10% below normal. Olive trees are widespread; the average annual yield of oil is about 2,500,000 gallons. Tobacco, corn, vegetables, flax, silk, figs and dates are also produced. Much of the area is more adapted to grazing than to agriculture. In 1954 there were 6,008,000 sheep, 893,000 cattle; (1953) 3,231,000 goats and 183,000 camels.

European industries include those dependent on crops, such as distilling and oil and flour milling, as well as the making of leather, tobacco and matches. There are also small native industries, particularly the traditional carpet weaving.

Exports in 1955 were valued at 161,184,000,000 fr.; imports, at 243,853,000,000 fr. Chief exports were wine (39%), iron ore (8%) and citrus fruits (6%). Chief imports were machinery and apparatus (7%), petroleum and products (6%) and sugar (5%). France took 74% of the exports and supplied 82% of the imports.

Algeria has 3,396 miles of railway. A central line runs from the Moroccan to the Tunisian frontier with branches north to all the ports and south into the Southern Territories. There is an excellent network of roads of more than 30,000 miles, and motor transport is well developed, including regular passenger and freight lines across the Sahara. Only French ships may normally trade between France and Algeria.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Northern Algeria extends inland for 185 to more than 200 miles. South of it are the big, economically unimportant Southern Territories. Low plains cover small areas near the coast, but 68 per cent of Algeria is a plateau between 2,625 and 5,250 feet above sea level. The region between the Sahara and the Mediterranean reaches a high point of 7,641 feet.

Most of the streams are periodic with the rains. The Chélif is the principal river, over 435 miles long. On the Saharan slopes, the oases or the hot sands absorb the streams as soon as they leave the mountain ridges.

Algeria is a leading producer of phosphates (1955: 763,500 metric tons). Iron ore of good quality (55% metal content) is found near the Tunisian frontier and on the Oran coast (1955: 3,600,000 tons). Zinc, lead and salt are also important minerals; and small amounts of oil and coal are produced.

Rainfall averages 20 to 40 inches on the coast, and decreases to virtually none in

the Sahara. On the coast, temperature average about 52° in winter, 77° in summer. Inland, the winter average is about 40° and summer about 81°, although the Sahara summer average is 95° to 105°.

**CAMEROON (FRENCH CAMEROONS).** Status: U. N. trust territory.

Capital: Yaoundé (population 30,000).

High commissioner: Roland Pré.

Foreign trade (1955): exports, 16,593,000,000 fr. C.F.A.\* (48% to France); imports, 18,162,000,000 fr. C.F.A.\* (63% from France). Chief exports: cacao (49%), coffee, bananas, timber, cotton.

Agricultural products: cacao (exports 1955: 55,593 metric tons), coffee, banana, cotton, rubber, millet, sweet potatoes.

Minerals: tin, gold, rutile.

Forest product: timber.

\* Colonies Françaises d'Afrique, equal to 2 metropolitan francs.

In 1884 the Cameroons became a German colony (the Kamerun), and after the conclusion of World War I the region was divided as a League mandate between Britain and France, four-fifths of the area going to France. Placed under French trusteeship by the United Nations in 1946, the area has political and financial autonomy under a French High Commissioner, responsible to the French government. Cameroons joined the Free French movement in 1940. The chief port is Douala; the administrative center, Yaoundé.

The climate is tropical and unhealthy for Europeans (12,269 in 1951); not even in cool months does the temperature generally fall below 70°. Rainfall is heavy—the coast (155 inches a year at Douala) and is fairly evenly distributed throughout the year.

**FRENCH EQUATORIAL AFRICA—STATUS:** Group of overseas territories.

Governor General: Paul Chauvet.

Capital: Brazzaville (pop. 1950: 84,000).

Foreign trade (1955): exports, 13,680,000,000 fr. C.F.A. (62% to France); imports, 18,349,000,000 fr. C.F.A. (58% from France). Chief exports: timber (40%), cotton (35%), diamonds, coffee, cacao.

Agricultural products: cotton (1955 exports: 33,157 metric tons), coffee, cacao, palm kernels and oil.

Minerals: gold, diamonds, and lead.

Forest products: timber, rubber, cotton gum, wax.

This area, an early slaving center, was first settled by France in 1839; French hegemony was subsequently extended by exploration and conquest of the native tribes. The territories declared for France following the armistice of July 1940, and Brazzaville became capital of Gaulle's Free French movement.

The Governor General, responsible to the Minister for France Overseas in the French Cabinet, administers the area as an administrative unit with the aid of an Administrative Council; each of the four t

itorial regions (Gabon [Gabun], Middle Congo, Ubangi-Shari, Chad) has a Governor responsible to him. There were, in 1951, 23,403 Europeans; most of the Africans are Negroes. There are Arab and Fula settlements in the Chad region, and several Moslem sultanates. Natural resources, both forest and mineral, are vast but relatively unexploited. Once economically dependent on forest products, the country developed after World War II as a producer of cotton, diamonds and gold. The area is capable of exporting large quantities of hard okoumé wood, either in logs or in veneer form.

The climate is tropical—hot and humid—and the average temperature is about 80° (78° at Brazzaville), varying only slightly throughout the year. Rainfall averages about 60 inches annually, with no marked wet or dry seasons.

**FRENCH SOMALILAND**—Status: Overseas territory.

Capital: Jibuti (population 27,723).

Governor: René Petitbon.

Foreign trade (1955): domestic exports, 253,000,000 Jibuti fr.\*; ship stores, 2,727,000,000 Jibuti fr.; imports (excluding ship stores), 2,324,000,000 Jibuti fr. Chief exports: salt, hides.

Mineral: salt.

\* 1 Jibuti franc = 1.64 metropolitan francs.

French Somaliland, at the southern entrance to the Red Sea, was acquired by France between 1883 and 1887 by treaties with the Somali sultans, although posts on the coast had been acquired in 1856. This small, largely arid and sparsely populated region is important chiefly because of the port of Jibuti, the main artery of Ethiopia's trade via the Jibuti-Addis Ababa allway. The area is administered by a Governor, responsible to the French government and assisted by an administrative council. It adhered to the Free French movement in Dec. 1942.

## French West Africa (Group of Overseas Territories) (L'Afrique Occidentale Française)

Governor General: Bernard Cornut-Gentille.

Principal cities (est. 1951): Dakar, 229,000 (capital, chief port); (est. 1953) Abidjan, 160,000 (export center); (est. 1952) Bamako, 100,000 (Niger river port).

Monetary unit: Franc C.F.A. (Colonies françaises d'Afrique, equal to 2 metropolitan francs).

Languages: French, native tongues.

Religions: Mohammedan, pagan.

**HISTORY AND GOVERNMENT.** The Senegals Colony, founded in 1626 at the mouth of the Sénégal River, was probably the first permanent white settlement in French West Africa in which the French

established themselves, largely for the purpose of pursuing the slave trade. After 1876 the coast settlements were extended steadily into the interior through a series of missionary and economic campaigns. In 1895 the colony of French West Africa was formed under one Governor General by the unification of its various components.

The Governor General of the area is appointed by the French government and is assisted by a Legislative Council and an elected Assembly. Governors responsible to him administer the eight constituent territories—Sénégal, French Guinea, Ivory Coast, Dahomey, Haute Volta (re-established in 1947), French Sudan, Mauritania and Niger. Each of these has considerable autonomy, with the central government supervising services common to all.

The area is represented in the French National Assembly, the Council of the Republic and the Assembly of the French Union.

**SOCIAL AND ECONOMIC CONDITIONS.** Attendance at elementary schools in 1954 was approximately 240,000 (9% of the child population). There were 10,718 secondary school students and 4,363 technical school students.

No racial unity exists in French West Africa, and there is great variation of physique, manner, custom and language. The population is native except for approximately 63,000 Europeans (1951). Non-Negroid tribes include the Saharans, Moors, Tuaregs and Fulbé. About half the population normally is Mohammedan, but a number of tribes are spirit worshippers.

Agriculture has expanded rapidly in recent years. Millet, rice and maize are the principal food crops, and vegetable oils are a leading commercial product. Peanuts, the chief export crop (1955: 850,000 metric tons) are cultivated in Sénégal, and palm kernels and oil are produced in Dahomey and the Ivory Coast. Other products are coffee, cotton, cacao and bananas. Stock raising is important in French Sudan and Mauritania, relatively dry districts in the northern part of the area. Manufacturing is undeveloped except for small native industries. Expansion is hindered by limited power facilities.

Recent trade statistics are as follows (in millions of francs C.F.A.):

	1953	1954	1955
Exports	46,761	58,264	52,417
Imports	55,242	66,445	67,199

Leading exports in 1955 were coffee (26%), cacao (21%), peanut oil (14%) and peanuts (13%). France took 62% of the exports and supplied 64% of the imports.

The middle Niger and lower Sénégal Rivers are navigable, but French West Africa's

railways (1950: 2,350 mi.) are more important as interior communications. Dakar, with the best harbor on the west African coast, is the principal port and also an important stop on international air routes between South America and Europe. There are several other good ports.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The area, comprising a sixth of Africa, is half as big as Europe; it is generally a plateau broken by two mountain ranges. The Futa Jallon, from 2,300 to 4,900 feet in elevation, parallels the coast for about 430 miles, and Mount Nimba, on the Liberian border, rises 5,250 feet. There are also mountainous regions in the Sahara districts to the north. The Niger, 2,600 miles long, is the principal river.

Important minerals include diamonds, gold, iron ore and bauxite; production of gold has dropped sharply in recent years but large-scale exploitation of iron ore and bauxite deposits is in progress. Iron ore production totaled 657,234 metric tons in 1955; bauxite, 479,219 tons. Timber and precious woods are important, especially in the Ivory Coast.

The central and northern parts of the colony have two seasons, rainy and dry. In the southernmost regions there are two rainy seasons, separated by a short dry season. Average annual rainfall at St. Louis is 16.7 inches; at Dakar, 20.2 inches. Temperatures on the west coast average about 70° in winter and 82° in summer, with daily variation of about 20°.

#### **MADAGASCAR AND DEPENDENCIES—Status: Overseas territory.**

Capital: Tananarive (Antananarivo) (census 1951: 182,982).

Governor General: Jean Soucadeaux.

Foreign trade (1955)\*: exports, 14,268,000,000 fr. C.F.A. (65% to France); imports, 21,418,000,000 fr. C.F.A. (73% from France). Chief exports: coffee (43%), rice (9%), tobacco (7%).

Agricultural products (exports 1955): coffee (47,437 metric tons); rice (44,670 tons), tobacco (3,921 tons), cloves, sugar, vanilla, manioc, bananas, maize, coconuts.

Minerals: graphite (exports 1955: 16,772 metric tons), mica, phosphates, gold.

Forest products: gum, medicinal plants, rubber, tannins, dyewoods.

\* Excluding Comoro Islands.

Madagascar, lying off the southeast coast of Africa, is the fourth largest island in the world, with a length of 995 miles and an average width of 250 miles. It remained independent under native rulers until 1885, when it came under French protection. French troops conquered the island in 1895 and it became a French colony the following year. The last native ruler, Queen Rānavālonā III, was exiled.

British troops landed on the island May 5, 1942, during World War II, and an armistice with Vichy French forces was

signed November 5, 1942. The island is administered by a Governor General responsible to the Minister for France Overseas in Paris, assisted by a General Assembly. Native nationalist outbreaks occurred in 1947 and French troops maintained order with difficulty.

The chief occupations are cattle raising (1953: 6,064,000 cattle) and agriculture; there are several food-processing and textile plants. The chief port is Tamatave on the east coast; the capital, Tananarive, is located on the central plateau. In 1951 there were about 52,000 French and 21,500 other European and Asian residents. The natives, collectively known as Malagasy, are divided into several tribes. Outlying dependencies include the islands of Europa, Juan da Nova, Bassas da India, Glorieuse and various scattered subantarctic islands known as Iles Australes. Under a 1955 law they and French Antarctica were to be separate overseas territory.

The Comoro Islands (832 sq. mi.), formerly a dependency, became an autonomous overseas territory effective Jan. 1, 1947 and are represented in the French parliament, although still partly under the authority of French officials in Madagascar. They are located in the Indian ocean at the north entrance of the Mozambique channel, about 300 mi. north of Madagascar. The Comoros consist of four main islands and several islets. The French Administrator is assisted by a Privy Council and an elected General Council. The population is largely Moslem. Exports include essential oils, sisal, vanilla, copra, cacao and cloves.

The climate of Madagascar is generally tropical, with a warm and wet season from November to April and a cool, dry season the rest of the year. Temperatures vary between 55.5° and 95° (at Tamatave, 80° in February, 68° in July). Rainfall varies from about 100 inches annually in the east and northwest to 16 inches in the south.

#### **RÉUNION (Bourbon)—Status: Département of Metropolitan France.**

Capital: St. Denis (population 41,163).

Prefect: Pierre Philip.

Foreign trade (1955): exports, 5,836,000,000 fr. C.F.A. (76% to France); imports, 7,138,000,000 fr. C.F.A. (66% from France). Chief exports: sugar (84%), essential oil. Agricultural products: sugar (exports 1955: 164,149 metric tons), vanilla, coffee, maize.

Discovered by Portuguese navigators in the 16th century, the island, then uninhabited, was taken as a French possession in 1638. It is located about 450 miles east of Madagascar, in the Indian Ocean.

There is no indigenous population. About three-quarters of the inhabitants are of European origin; the remainder are Creoles, mulattoes, Negroes, Indians and



er Asiatics. Tropical cyclones of hurricane variety are frequent during the range of seasons. Occasionally a *raz de marée* (tidal wave) does great damage. Temperature varies from about 62° to 78°. Sugar-cane cultivation and the production of rum are the principal occupations.

**TOGO**—Status: U. N. trust territory. Capital: Lomé (population 30,063). Commissioner: Jean Berard.

Foreign trade (1955): exports, 3,882,000,- fr. C.F.A. (62% to France); imports, 46,000,000 fr. C.F.A. (43% from France). Chief exports: cacao (54%), coffee, palm kernels, copra, cotton.

Agricultural products: cacao (exports 1955: 13,080 metric tons), palm kernels, oil, cotton, copra, coffee.

Mineral: iron ore.

Forest products: dyewoods, oil palms.

Togo, a part of the former Slave Coast, lies between the British Gold Coast colony and French West Africa. Established as a German colony in 1884, the area was divided as a League mandate by France and Britain at the end of World War I, with France obtaining two-thirds of the total area. It was placed under U. N. trusteeship in Dec. 1946. Agriculture and grazing are the chief industries. In 1951, there were 1,500 Europeans. The coastline, only 100 miles long, is low, sandy and without harbors.

The coastland climate is hot, humid and unhealthy, with wet seasons lasting from March to June and from September to November. Rainfall is about 55 inches yearly on the south.

Tunisia. See Tunisia

## WESTERN HEMISPHERE

**FRENCH GUIANA** (including ININI)—Status: Département of Metropolitan France.

Capital: Cayenne (population 12,934).

Prefect: Pierre Maloy.

Foreign trade (1955): exports, 362,000,- fr. (73% to France); imports, 2,962,000 fr. (70% from France). Chief exports: rum (42%), gold, timber.

Agricultural products: bananas, cacao, manioc, rice, sugar cane.

Mineral: gold (exports 1955: 8,420 troy oz.).

French Guiana, lying north of Brazil and west of Surinam (Dutch Guiana) on the northeast coast of South America, was first settled in 1626. Penal settlements, embracing the area around the mouth of the Amazon River and the Îles du Salut (including Devil's Island), were founded in 1763; they were replaced by refugee camps in the 1940's.

During World War II French Guiana at first adhered to the Vichy government, but in 1943 the Free French took over in March 1943.

The large and scantily populated territory of ININI in the hinterland is adminis-

tered separately. Economic development is extremely backward; transportation is almost entirely by water, conditions are unsanitary and large quantities of foodstuffs must be imported.

January temperatures average 79°, September and October temperatures 82°.

**GADELOUPE**—Status: Département of Metropolitan France.

Capital: Basse-Terre (population 11,430).

Prefect: Jacques Ravall.

Foreign trade (1955): exports, 11,881,000,000 fr. (80% to France); imports, 13,056,000,000 fr. (78% from France). Chief exports: sugar (49%), bananas.

Agricultural products (1953-54): sugar, (90,000 metric tons), bananas, coffee, cacao, manioc, vanilla.

Guadeloupe, lying in the West Indies about 300 miles southeast of Puerto Rico, was discovered by Columbus in 1493. French colonization began in 1635. It consists of two large islands, separated by a narrow arm of the sea, and several outlying smaller islands. Most of the population is Negro and mulatto. The largest city and chief port is Pointe-à-Pitre (population 25,869). About half the cultivated area is devoted to sugar cane. The manufacturing of rum and spirits is the principal industry. Mean annual temperature is 78°. Average annual rainfall is 86 inches on the coast and much higher in the interior.

**MARTINIQUE**—Status: Département of Metropolitan France.

Capital: Fort-de-France (population 80,000).

Prefect: Gaston Villéger.

Foreign trade (1954): exports, 8,289,000,-000 fr. (91% to France); imports, 12,699,000,000 fr. (76% from France). Chief exports: sugar (44%), rum, bananas.

Agricultural products (1953-54): sugar (65,000 metric tons), bananas, pineapples, cacao, coffee.

Manufactures: rum, sugar.

Martinique, lying in the Lesser Antilles about 300 miles northeast of Venezuela, was probably discovered by Columbus in 1502 and was taken for France in 1635. Following the Franco-German armistice of 1940 it had a semi-autonomous status under the High Commissioner, Admiral Georges Robert, until 1943, when he relinquished his authority to the Free French. The area, administered by a Prefect assisted by an elected council, is represented in the French legislature. The population is mainly Negro and mulatto. Most of the arable land is devoted to sugar cultivation. Fort-de-France, the capital and chief commercial center, has an excellent harbor. Mean annual temperature of the coast region is 80° (77° in January, 83° in June); annual rainfall is 87 inches.

**ST. PIERRE AND MIQUELON**—Status: Overseas territory.

Capital: St. Pierre. (population 3,997).

Administrator: Pierre Sicaud.

Foreign trade (1955): exports, 229,000,-000 fr. C.F.A. (35% to France); imports, 585,000,000 fr. C.F.A. (53% from Canada). Chief export: fish and products.

The sole remnant of the French colonial empire in North America, these islands were first occupied by the French in 1660. Their only importance arises from proximity to the Grand Banks (10 mi. south of Newfoundland) making them the center of the French Atlantic cod fisheries.

## ASIA

### French India

The one-time French possessions in India, dating back to 1674, are now part of the Republic of India. Chandernagor, in Bengal, was transferred to India on May 2, 1950, in accordance with a popular referendum. Heavy Indian political and economic pressure forced the transfer on Oct. 31, 1954, of the remainder—Pondichéry, Karikal and Yanam on the Coromandel coast and Mahé on the Malabar coast.

### Indo-China

**HISTORY.** Indo-China, at the southeast corner of Asia, first met the West in the 16th century, when Portuguese traders and missionaries arrived.

French influence dates from 1787, and in the 19th century France received preferential treatment for helping the Emperor of Annam recover his throne. During the last half of the century, France gradually extended influence over the whole of Indo-China.

Until the beginning of World War II, Indo-China was an administrative federation of one colony—Cochin-China; four protectorates—Annam, Tongking, Cambodia and Laos; and a special territory—Kwangchowan (returned to China in 1945). These had various degrees of native rule, but the real administrator of each unit was the French Chief Resident.

After France fell in 1940, Vichy authorized the entry of Japanese troops, and the country became one of the springboards for the Japanese campaign against Singapore. When, in March 1945, the Japanese seized control of the whole country, Annam and Cambodia declared their independence. After the Japanese surrender, British and Chinese troops occupied Indo-China in the face of a growing nationalist movement, and restored order for the French authorities, who assumed control officially on March 4, 1946.

French postwar plans for a federation of Indo-China were thwarted by a Communist-led nationalist revolt which erupted in Dec. 1946 and continued until

July 1954. In the course of it, the rebels (called Vietminh) extended their control to most of Vietnam (Tongking, Annam and Cochin-China) outside large urban centers and invaded Laos and Cambodia.

Amid the hostilities, Vietnam, Cambodia and Laos were recognized as independent states within the French Union.

The conflict was ended by armistice agreements signed at Geneva, Switzerland, on July 21, 1954, under which Vietnam was cut about in half along the 17th parallel, the northern part going to Vietnam. Elections for a unified government in Vietnam were to be held within 2 years.

(See separate articles on Vietnam, Cambodia and Laos).

## OCEANIA

**FRENCH PACIFIC SETTLEMENTS—STATUS:** Overseas territory.

Governor: Jean Toby.

Capital: Papeete, on Tahiti (population 1946: 12,428).

Foreign trade (1955): exports, 618,000 fr. C.F.P.\*; imports, 701,000,000 fr. C.F.P. Chief exports: copra (37%), phosphate, vanilla.

Agricultural products: coconuts, sugar, vanilla, tobacco.

Mineral: phosphate (1955 exports: 22,180 metric tons).

\* Colonies Françaises du Pacifique, equal to 5½ metropolitan francs.

The term French Pacific Settlements applied to the scattered French possessions in the eastern Pacific—Mangareva (Gambier), Makatea, Marquesas Islands, Raiatea, Rurutu, Rimatara, Society Islands, Tuamotu Archipelago, Tubuai and Raiavae, which were organized into a single colony in 1903. The appointed Governor is assisted by an Administrative Council. The principal and most populous island—Tahiti, the Society group (pop. 1946: 24,820)—was claimed as French in 1768. Plebiscite conducted in September, 1940, gave support to the Free French. The natives are mostly Polynesians.

### NEW CALEDONIA AND DEPENDENCIES

—Status: Overseas territory.

Capital: Nouméa (population 20,000).

Governor: René Hoffherr (also French Commissioner General in the Pacific).

Foreign trade (1955): exports, 1,940,000 fr. C.F.P.; imports, 1,637,000,000 fr. C.F.P. Chief exports: nickel (83%), chrome, coffee.

Agricultural products: coffee, corn, cotton, manioc, rice, tobacco.

Minerals (1955): nickel (8,925 metric tons, matte); chromite (89,108 tons).

Sea product: mother-of-pearl.

New Caledonia (8,533 sq. mi.), lying about 1,070 miles northeast of Sydney, Australia, was discovered by Captain James Cook in 1774 and annexed by France in 1853. The government, in the hands of an appointed Governor and an elective Council

, also administers the Isle of Pines, the Wallis Archipelago, the Loyalty Islands, the Chesterfield Islands, Walpole, the Huon Islands, Futuna and Alofi, with a total area of 1,121 square miles. The area—taken over in the summer of 1940 by the Free French after a bloodless revolution—is one of the richest of the Pacific Islands in mineral resources, particularly nickel and bauxite ore. The natives are Melanesians; about one-third of the population is white and one-fifth Indo-Chinese and Javanese. French penal colony was established in 1854. Average temperature in New Caledonia varies between 65° and 72°.

**NEW HEBRIDES**—Status: Anglo-French condominium.

Capital: Vila (population 1,200).

Foreign trade (1954): exports, 295,579,000 fr. C.F.P.; imports, 205,604,000 fr. C.F.P. Chief exports: copra (78%), cacao. Agricultural products: coconuts, cacao, coffee.

Sea products: trochus and burghaus shell.

The New Hebrides, under joint Anglo-French administration since 1914, lie northeast of New Caledonia. The islands, about 40 in number, joined the Free French movement after a plebiscite in July 1940. Most of the natives are Melanesians of mixed blood; there were 350 British and 1,300 French in 1951. The largest island is Espiritu Santo (875 sq. mi.). French and British high commissioners in the Pacific are represented by resident commissioners.

## GERMANY

**HISTORY.** In Caesar's time, the territory that is now Germany was inhabited by barbarous tribes that came originally perhaps from Central Asia. One of these Germanic tribes, the Franks, attained supremacy in western Europe under Charlemagne, who was crowned Holy Roman Emperor in A.D. 800. By the Treaty of Verdun (843), Charlemagne's lands east of the Rhine were ceded to the German Prince Louis. Additional territory acquired by the Treaty of Meerssen (870) gave Germany approximately the area she maintained throughout the Middle Ages. For several centuries after Otto the Great was crowned king in 936, the German rulers were also nominal heads of the Holy Roman Empire. Relations between State and Church were changed by the Reformation, which began with Martin Luther's 95 theses, and came to a head in 1547, when Charles V shattered the forces of the Protestant League at Mühlberg. Freedom of worship was obtained by the Peace of Augsburg (1555), but a Counter Reformation took place later, and a dispute over the succession to the Bohemian throne brought

on the Thirty Years' War (1618-48) which devastated Germany and left the empire divided into hundreds of small principalities virtually independent of the Emperor. Meanwhile, Prussia was developing into a province of considerable strength. Frederick the Great (1740-86) reorganized the Prussian army and defeated Maria Theresa of Austria in a struggle over Silesia. The conflict with revolutionary France hastened the disintegration of the empire, and in 1806 Francis II of Austria laid down the Imperial German crown. After the defeat of Napoleon at Waterloo (1815), the struggle between Austria and Prussia for supremacy in Germany continued, reaching its climax in the defeat of Austria in the Seven Weeks' War (1866) and the formation of the Prussian-dominated North German Confederation (1867).

At the close of the victorious war with France (1870-71), William I, King of Prussia, was crowned Emperor of Germany (Jan. 18, 1871). Under the guidance of the Imperial Chancellor, Prince Bismarck, Germany took a new place in world affairs, at the same time expanding her foreign trade and home industry rapidly. The Triple Alliance was formed with Austria and Italy in 1882. However, upon the accession of William II (1888-1918), Bismarck was dismissed and Russia was alienated. International rivalry was intensified in the early years of the 20th century, culminating in World War I, in which Germany, supporting Austria-Hungary's demands on Serbia, suffered final defeat. By the terms of the Treaty of Versailles (1919) Germany lost about 27,000 square miles of territory, including all her colonies, plus Alsace-Lorraine, northern Schleswig, Eupen-Malmédy, Upper Silesia, and considerable areas in the east. William II had abdicated (Nov. 9, 1918), and a federal republic was organized under the Constitution adopted at Weimar in 1919. The Constitution was attacked by both the Right and Left; several Communist uprisings took place in the early 1920s, and in 1923 Adolf Hitler's abortive putsch was defeated. Germany's inability to fulfill the heavy reparations demands stipulated by the Treaty of Versailles led to French occupation of the Ruhr (1923-25). National bankruptcy was avoided by adoption of the Dawes Plan (1924) and later the Young Plan.

The chancellorship of Brüning, leader of the Catholic Center party (1930-32), saw increasing economic and financial distress and the practical cessation of reparations payments. Hitler's rising National Socialist party won a plurality in both the July and November Reichstag elections in 1932, but not until the failure of Franz von Papen and Kurt von Schleicher to form governments did President Hindenburg name Hitler Chancellor (Jan. 30, 1933). With the death of Hindenburg in 1934,



Hitler became complete master of Germany, which he rapidly converted into a totalitarian state under the aegis of the Nazi party. All other political parties were banned, and the Jews were subjected to severe persecution. Through his foreign policy, Hitler repudiated the Treaty of Versailles and began full-scale rearmament. In 1935 he withdrew from the League of Nations, and in 1936 he reoccupied the Rhineland and signed the anti-Comintern pact with Japan, at the same time strengthening relations with Italy. Austria was annexed in March 1938. By the Munich agreement (Sept. 1938) he gained the Czech Sudetenland, and in violation of this agreement he completed the dismemberment of Czechoslovakia in March 1939. But his invasion of Poland on Sept. 1, 1939, precipitated British and French declarations of war.

On May 8, 1945, Germany surrendered unconditionally to Allied and Soviet military commanders, and on June 5 the four-nation Allied Control Council became the *de facto* government of Germany.

At the Berlin (or Potsdam) Conference (July 17-Aug. 2, 1945) President Truman, Stalin and Prime Minister Attlee set forth the principles by which the Allied Control Council was to be guided. They were: Germany's complete disarmament and demilitarization; destruction of its war potential; rigid control of industry; decentralization of the political and economic structure. Pending final determination of territorial questions at a peace conference, the three victors agreed in principle to the ultimate transfer of the city of Königsberg (now Kaliningrad) and its adjacent area to the Soviet Union and to the administration by Poland of former German territories lying generally east of the Oder-Neisse line.

For purposes of control, Germany was divided in 1945 into four national occupation zones, each headed by a Military Governor, assisted by appropriate supervisory and operating staffs.

Efforts to unify Germany were totally unsuccessful, and the western powers were unable to agree with the U.S.S.R. on any fundamental issue. Work of the Allied Control Council was hamstrung by repeated Soviet vetoes; and finally, on March 20, 1948, the U.S.S.R. walked out of the Council. Meanwhile, the U. S. and Britain had taken steps to merge their zones economically (Bizone); and on May 31, 1948, the U. S., Britain, France and the Benelux countries agreed to set up a German state comprising the three western zones. At the same time the western powers introduced a new German currency.

The Soviet Union replied to these measures by clamping a blockade on all ground communications between the western zones and Berlin. The western Allies, re-

fusing to be driven out of the capital, immediately organized a gigantic airlift to fly supplies into the beleaguered city. Before the Russians were finally forced to lift the blockade on May 12, 1949, 60,000 men were engaged in the airlift.

In return for lifting the blockade, the U.S.S.R. asked only that the Big Four Foreign Ministers meet again to discuss German unification. The conference, meeting in Paris from May 23 to June 20, 1949, ended as usual in a deadlock.

The Big Four Foreign Ministers met once more at Berlin from Jan. 25 to Feb. 1, 1954, again without success.

## German Federal Republic

Area: 94,719 square miles.\*

Population (est. Jan. 1956): 50,366,000 (predominantly German).

Density per square mile: 531.7.

President: Theodor Heuss.

Chancellor: Konrad Adenauer.

Principal cities (est. 1953): Hamburg, 1,658,000 (chief port); Munich, 870,000 (Bavarian capital); Cologne, 629,200 (transportation center); Essen, 624,100 (steel center); Frankfurt am Main, 564,400 (manufacturing); Bonn, 130,000 (capital).

Monetary unit: Deutschmark (DM).

Language: German.

Religions (census 1950): Protestant 52.2%; Roman Catholic, 43.8%; others, 4.0%.

\* Excluding west Berlin.

The German Federal Republic came into formal existence on Sept. 21, 1949, when the Allied High Commission turned over to it the administration of the U. S., British and French zones of occupation. On May 8, 1949, the constituent assembly at Bonn had approved a Basic Law or Constitution for western Germany; it came into force on May 23, after approval by the *Landtage* of the 11 constituent *Länder*. Parliamentary elections were held on Aug. 14; and on Sept. 12, Free Democratic leader Theodor Heuss was elected President of western Germany. On Sept. 15, the *Bundestag* confirmed his appointment of Konrad Adenauer, leader of the Christian Democratic party, as Chancellor. His party won a sweeping victory in parliamentary elections held Sept. 6, 1953. Heuss was re-elected President on July 17, 1954.

GOVERNMENT. With the coming into force on May 5, 1955, of a series of agreements signed at Paris on Oct. 23, 1954, the Allied occupation came to an end and the Federal Republic attained full sovereignty and independence. The Paris agreements followed the rejection by France of an agreement signed May 27, 1952, creating within NATO a European Defense Community. Under the 1954 agreements, Germany and Italy became members of the Brussels treaty organization created in 1948 and renamed the Western European Union. Germany also became a member of NATO.

The Basic Law or Constitution of the public provides for a federal form of government headed by a President elected every 5 years by a Federal Convention. The Parliament consists of a *Bundestag* whose members are elected every 4 years by popular vote and a *Bundesrat* whose members are appointed by the *Länder* governments. Actual executive power is in the hands of the Cabinet, answerable to the *Bundestag* and headed by a Chancellor appointed by the President, subject to the right of the *Bundestag* to elect a Chancellor of its own preference. Provision was made for the accession of *Länder* in the Soviet zone. Each of the 9 constituent *Länder* must have a republican form of government with an assembly which is elected by universal suffrage.

The party standing in the *Bundestag* (elections of Sept. 6, 1953) was as follows: Christian Democrats 244, Social Democrats 101, Free Democrats 48, All-German 27; others 17.

One of the 1954 Paris agreements authorized the U. K., the U. S. and France to keep troops in western Germany, not as occupation troops but in view of the need to ensure the defense of the free world. A protocol specified that German federal armed forces would not exceed the numbers fixed in the EDC treaty of May 1952—i.e., 12 divisions, a tactical air force of about 1,350 aircraft and light coastal defense and escort vessels. Under the Paris agreements relating to NATO, forces of NATO countries stationed on the continent of Europe, including those in Germany, are with certain exceptions under the authority of the Supreme Allied Commander, Europe.

#### SOCIAL AND ECONOMIC CONDITIONS.

**Education.** Education is compulsory between the ages of 6 and 14. In May 1954 there were 29,344 elementary schools with 32,395 pupils, 759 higher elementary schools with 309,512 pupils, 1,573 secondary schools with 774,317 students, 463 college schools (Hamburg and Bremen) with 292,419 pupils and 17 universities with 81,949 students.

**Agriculture.** Agriculture is characterized by mixed farming, the climate and the soil permitting cultivation of a variety of crops and most types of livestock. Rye and potatoes are staple crops in the north; grains and sugar beets in the central regions. The northwestern and southern areas are noted for dairying, while the west is the chief fruit- and wine-producing region. The soil is generally poor, and high crop yields are dependent upon large-scale use of fertilizers.

Production data for western Germany (excluding the Saar) are as follows (provisional, in thousands of metric tons):

	1953	1954	1955
Wheat	3,180	2,893	3,378
Rye	3,280	4,100	3,498
Barley	2,072	1,920	2,079
Oats	2,554	2,473	2,478
Potatoes	24,535	26,769	22,874
Beet sugar	1,408	1,313	1,266

In Dec. 1955, western Germany (excluding the Saar) had 11,552,490 cattle, 1,098,487 horses, 14,593,300 hogs and 1,188,043 sheep.

Western Germany is not self-sustaining in food. Difficulties stem to a considerable extent from the fact that Poland now controls the area east of the Oder-Neisse, which contained 28 per cent of prewar Germany's arable land and produced about 25 per cent of its food.

**Industry.** Western Germany's industry is well-developed and highly diversified. It accounted for about two-thirds of Germany's prewar industrial production and for a large part of iron and steel production. In March 1956, employment in industry was 17,531,000; there were 1,019,000 unemployed.

Production for western Germany (monthly averages, in thousands of metric tons):

	1953	1954	1955
Pig iron and ferroalloys	976	1,048	1,381
Crude steel	1,285	1,453	1,778
Cement	1,281	1,357	1,564
Cotton yarn	28.60	30.77	31.06
Wool yarn	8.79	8.77	9.55
Automobiles	30.76*	43.18*	58.79*
Electrical energy	5,038†	5,656†	6,315†
Manufactured gas	1,538‡	1,503‡	1,740‡

\* Thousands of units. † Millions of kwh. ‡ Millions of cu. m.

Shipbuilding has regained its former prominence; launchings in 1954 (268 ships of 963,114 gross tons) were second only to those of the United Kingdom. Industrial production in 1955 was 130% of the 1953 level.

Western Germany is a member of the European Coal and Steel Community, which commenced activities on Aug. 10, 1952. It has jurisdiction over the production and allocation of coal and steel by its member nations.

**Trade.** Recent foreign trade data for the area which now comprises the republic are as follows (in millions of Deutschmarks, including west Berlin):

	1953	1954	1955*
Exports	18,389	21,980	25,702
Imports	15,848	19,210	24,353

\* Provisional.

Leading customers in 1955 were the Netherlands (9%), France (7%), Sweden (7%), Belgium (7%) and the U. S. (6%).

Leading suppliers were the U. S. (13%), France (9%), the Netherlands (7%), Belgium (6%) and Sweden (5%). Leading exports included vehicles (10%), electrical machinery and apparatus (8%), coal (4%), coke (4%) and ships (3%). Imports included raw copper (4%), coal (4%), cotton (4%), wool (3%) and iron ore (3%).

**Communications.** In 1954, the western German rail network had a total length of 21,900 miles, all publicly owned. Highway mileage in 1953 was 79,437, including 1,315 mi. of *autobahnen*.

On July 1, 1954, the west German merchant fleet aggregated 2,227,195 gross tons. The principal seaports of western Germany are Hamburg and Bremen.

Inland waterway transportation is of great importance; navigable waterways and canals total 2,650 miles. Over half the traffic is carried on the Rhine River, which links the Ruhr area with Belgian and Dutch ports.

Shipping on the Rhine is controlled by the Central Commission of the Rhine—an international body composed provisionally of U. S., British, French, Swiss, Dutch and Belgian representatives—which was reconvened in October 1945.

**Finance.** Recent data are as follows (in millions of Deutschemarks):

	1953-54	1954-55	1955-56*
Revenue	27,309	27,962	30,596
Expenditure	27,949	28,189	30,596

\* Budget estimate.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The northern plain, the central hill country and the southern mountain district constitute the main physical divisions of western Germany. The Bavarian plateau in the southwest averages 1,600 feet above sea level, but it reaches 9,721 feet in the Zugspitze, the highest point in Germany.

There are several important navigable rivers. In the south the Danube, rising in the Black Forest, flows east across Bavaria into Austria. The other important rivers flow north. The Rhine, which rises in Switzerland and flows across the Netherlands in two channels to the North Sea, is navigable by smaller ocean-going vessels as far as Cologne. The Rhine and the Elbe, which also empties into the North Sea, are navigable within Germany for ships of 400 tons. The Weser, flowing into the North Sea, and the Main and Mosel (Moselle), both tributaries of the Rhine, are also important.

**Minerals and Forests.** Aside from rich deposits of coal and potash, western Germany's mineral wealth is not considerable. The Ruhr, Krefeld and Aachen districts constitute one of the world's greatest coal mining regions, with total reserves es-

timated at 65,000,000,000 tons. Production in this area is handicapped by the prevalence of thin seams, but distribution is favored by easily accessible natural waterways and efficient canals. Known petroleum resources are meager, and supplies of iron ore, copper, lead and zinc are insufficient for domestic needs. Mineral production (excluding the Saar) was as follows in 1955: coal, 130,729,000 metric tons; lignite, 90,358,000 tons; iron ore (metallic content 30%), 11,300,000 tons; potash ( $K_2O$  content), 2,020,000 tons.

About 23 per cent of the total area of western Germany is covered by commercial forests, which yield timber as well as material for paper, wood fiber, cellulose and other products.

Fishing is an essential part of the economy. In 1955 coast and sea fisheries yielded 751,294 metric tons valued at Dm. 248,506,000. Herring are the most important.

**Climate.** The climate of western Germany is intermediate between the oceanic climate of western Europe and the continental climate farther east. The average summer temperature is 60° to 62°. The sheltered mountain valleys of the south enjoy a more temperate climate, especially the valley of the Rhine above Mainz. Rainfall is heaviest in the south and west (over 30 inches).

## German Democratic Republic

Area: 41,380 square miles.\*

Population (est. 1955): 16,500,000\* (predominantly German).

Density per square mile: 398.7.

Soviet High Commissioner: G. M. Pushkin.

President: Wilhelm Pieck.

Premier: Otto Grotewohl.

Principal cities (est. 1953): Leipzig, 607,700 (trading, publishing center); Dresden 510,100 (railway center, Elbe port); Karl-Marxstadt (Chemnitz), 298,500 (textiles); Halle am der Saale, 278,400 (railway center); Magdeburg, 252,300 (iron and steel products).

Monetary unit: Ostmark.

Religions (census 1946): Protestant 81.3%; Roman Catholic, 12.1%; other 6.6%.

\* Excluding east Berlin.

**HISTORY AND GOVERNMENT.** The so-called German Democratic Republic comprises the Soviet zone of occupation of eastern Germany. It was proclaimed on Oct. 7, 1949, with its seat at Berlin, on the basis of a Constitution adopted May 3, 1949, by a People's Congress chosen under a plebiscite arrangement in elections held in the Soviet zone and eastern Berlin on May 15 and 16, 1949. The Congress elected a People's Council (*Volksrat*) which was transformed on Oct. 7 into a provisional People's Chamber (*Volkskammer*).



chamber of the States (*Länderkammer*) was nominated on Oct. 10, and on Oct. 11 both chambers elected Communist-leader Wilhelm Pieck as President of the republic and Otto Grotewohl as Minister-President and Premier. The Constitution is soviet in nature and the government is under complete Communist domination. Soviet government supervision is exercised by the Soviet High Commissioner.

The republic lies largely between the Elbe and Oder rivers, including most of Brandenburg, Mecklenburg and the industrial Saxon and Thuringian lands.

**SOCIAL AND ECONOMIC CONDITIONS.** About 22 per cent of the population is engaged in agricultural pursuits and the area is almost self-sufficient in foodstuffs. Postwar yields have, however, suffered from droughts and shortages of fertilizers. The most recent production data available in 1956 (in thousands of metric tons):

	1948	1949	1950
Wheat	999	926	815
Rye	1,941	2,025	2,130
Barley	809	1,087*	1,140*
Sugar beets	4,126	3,545	5,400
Potatoes	12,408	8,499	11,160†

\* Includes mixed grain. † 1951.

In 1953 there were in the area an estimated 3,876,000 cattle, 8,283,000 hogs, 428,000 sheep and 750,000 horses.

Most of the industrial establishments, particularly in heavy industry, have been nationalized. The area accounted for 26 per cent of prewar Germany's industrial production, ranking first in textiles, paper and pulp and ceramics and glass (especially optical glass produced by the famous Jena works). A Two-Year Plan inaugurated in 1949 had the object of raising the volume of production to 81 per cent of the 1936 level by the end of 1950, while a Five-Year Plan initiated in 1951 aimed at doubling the 1936 level by 1955. Unofficial production data are as follows: pig iron (1952: 765,000 metric tons), raw steel (1954: 2,255,000 tons), cement (1952: 2,560,000 tons).

Foreign trade is carried on through government-owned trading companies. Trade is confined largely to Europe. Important imports include foodstuffs, minerals and textiles; exports include machinery, engineering equipment and chemicals.

Railways, highways and inland waterways were reported in 1956 still inadequate to meet the demands of the area's economy. The rehabilitation and expansion of transport facilities was emphasized in connection with the Two- and Five-Year Plans.

The 1955 budget balanced revenue and expenditure at 38,100,000,000 ostmarks.

**NATURAL RESOURCES; CLIMATE.** The area is rich in minerals. It has

only minor deposits of coal (1953 production: 3,500,000 metric tons) and deposits of iron ore are scanty and of low quality (1952: 748,000 tons). It does have important deposits of lignite (1953: 177,500,000 tons) and crude potash (1951: 1,400,000 tons).

Most of the area is part of a low plain. The climate is temperate for the most part but with more difference between summer and winter than in western Germany. Rainfall throughout most of the area varies between 20 and 30 inches annually.

## Berlin

Area: 341.2 square miles.

Population (est. 1954): 3,369,000.

Berlin, the capital of prewar Germany, is surrounded by the German Democratic Republic. It is occupied by the forces of the U. S., the U. K., France and the U.S.S.R., each having its own sector of occupation. The three western sectors contain 55% of the area and 63% of the population.

The supreme authority in western Berlin is a tripartite *Kommandatura* which has responsibility for the exercise of the powers reserved to the occupation forces under the Berlin Charter, a document analogous to the former west German Occupation Statute. With the termination of the Allied occupation of western Germany, Allied controls were substantially relaxed.

Other powers of government are exercised by a City Assembly elected by popular vote and a *Magistrat* (city council) chosen by the Assembly.

Supreme authority in the eastern sector of Berlin is exercised by the Soviet High Commissioner. Powers not exercised by him or by the German Democratic Republic are vested in a "rump" city government, which proclaimed itself in power Nov. 30, 1948. Major anti-Communist riots broke out in east Berlin in June 1953.

## The Saar

Area: 991 square miles.

Population (est. 1954): 980,858.

Density per square mile: 989.8.

Premier: Dr. Hubert Ney.

Principal city: Saarbrücken (est. pop. 116,395).

Monetary unit: French franc.

The Saar is an industrial and mining region lying on Germany's western frontier north of Lorraine. Under the Treaty of Versailles it was detached from Germany and placed under the administration of the League of Nations, its coal mines being transferred to France. It voted in Jan. 1935 for reunion with Germany.

Part of the French zone of occupation after World War II, it was to be politi-

cally united with Germany by Jan. 1, 1957, under a Franco-German agreement of June 4, 1956, and was to be economically integrated into western Germany by 1960. One of the 1954 Paris agreements provided for the so-called Europeanization of the Saar, but this proposal was rejected by the people in a referendum Oct. 23, 1955. Subsequent Diet elections returned a pro-German majority. Under the Saar's Constitution it had a popularly elected Diet of 50 members, to which the Cabinet headed by the Premier was responsible. There was no head of state as such.

Coal reserves are conservatively estimated at 9,000,000,000 metric tons. Under an agreement concluded with France on Mar. 3, 1950, the mines are under French management with some Saar participation, an annual royalty being paid to the Saar by France. Production in 1955 included 17,328,000 metric tons of coal, 3,168,000 tons of raw steel and 2,880,000 tons of pig iron and ferroalloys.

## Greece (Kingdom)

(Hellas)

Area: 51,182 square miles.\*

Population (estimated 1954): 7,900,000\* (1940, excluding the Dodecanese: Greek, 92.8%; Turkish, 3.8%; Macedonian, 1.3%; Spanish, 1%; others, 1.1%).

Density per square mile: 154.4\*

Sovereign: King Paul I.

Premier: Konstantinos Karamanlis.

Principal cities (census 1951, municipal areas only): Athens, 565,084 (capital); Salonika, 217,049 (seaport); Piraeus, 186,014 (port of Athens); Patras, 79,014 (seaport); Volos, 51,144 (seaport).

Monetary unit: Drachma.

Languages: Greek, Turkish.

Religions: Greek Orthodox, 96%; Mohammedan, 2%; Jewish, 1.1%; others, .9%.

\* Including the Dodecanese.

**HISTORY.** Greece, with a recorded history going back to 776 B.C., reached the peak of its glory in the 5th century B.C., and by the middle of the 2nd century B.C., it had declined to the status of a Roman province. It remained within the Eastern Roman Empire until Constantinople fell to the Crusaders in 1204. In 1453, the Turks took Constantinople, and by 1460 Greece was a Turkish province. The insurrection made famous by the poet Lord Byron broke out in 1821, and in 1827 Greece was set up an independent nation, with sovereignty guaranteed by Britain, France and Russia. Prince Otto of Bavaria was recognized as King five years later, but he was ousted by a revolution in 1862. Prince William of Denmark, as George I, succeeded him.

Up to this time Greece consisted only of the Peloponnesus and the lower part of the peninsula north of the Gulf of Corinth. Britain gave Greece the Ionian Islands in 1864, and Thessaly was added in 1881.

Greek success in the Balkan Wars of 1912-13 brought the addition of Macedonia, Epirus, Crete and many Aegean Islands. In World War I, Greece kept a precarious neutrality until June, 1917, when King Constantine (who had succeeded George I in 1913) was forced to abdicate in favor of his second son, Alexander. Greece then entered the war on the Allied side. By the Treaty of Sèvres, Greece was awarded Thrace and part of Asia Minor. Turkey, however, drove the Greeks out of Smyrna in 1922.

Greece was proclaimed a republic on March 25, 1924, and there followed strife and dissension between Royalists and Republicans, although fair order was maintained during the premierships of Eleutherios Venizelos from 1928 to 1933.

In 1935, the people voted for the return of King George II, who had abdicated in 1924 after a short rule. In April 1936, General John Metaxas became Premier and by August he had abolished Parliament and set up a dictatorship.

Greece was invaded by the Italians in 1940. By April 1941, the Greeks not only had driven the Italians out of Greece but were well into Albania. The Germans came to Mussolini's rescue, invaded Greece from Bulgaria, and took Athens on April 27, 1941. Starvation and harsh persecution of the Greeks were common during the Axis occupation. After liberation, Greece became a land of conflict with armed bands of Royalists and Communists terrorizing the nation. The government, which had fled the country, returned in Oct. 1944, following Greece's liberation by British forces. Five years of civil war followed, with government troops fighting Communist-led guerrillas, who were aided by the neighboring Communist satellites of the Soviet Union.

The country approved the return of George II by a large majority in a plebiscite held Sept. 1, 1946. The King returned on Sept. 28 but died April 1, 1947. He was succeeded by his brother Paul I.

An important postwar development in troubled Greece was the extension of U. S. financial and technical assistance, supervised by a U. S. mission. Greek forces thus were able to make good progress against the Communist guerrillas, and the cessation of hostilities was announced on Oct. 16, 1949.

Elections held on Nov. 16, 1952, resulted in a sweeping victory for the Greek Rally party, which won 239 out of the 300 seats in the national assembly. Field Marshal Alexander Papagos, its leader, became Premier on November 18, 1952. On his death Oct. 4, 1955, Konstantinos Karamanlis became Premier. The Greek Rally lost ground in elections Feb. 19, 1956, but retained its majority.

Greece was admitted to NATO in 1951 and signed a defensive alliance with Turkey and Yugoslavia in 1953.

**GOVERNMENT AND DEFENSE.** Greece is a constitutional hereditary monarchy. Nominal executive power is vested in the King, but the government is administered by a Council of Ministers, headed by the Premier, which must enjoy the Assembly's confidence.

Military service is compulsory. U. S. aid in 1948 made possible an increase in army strength from 120,000 to 132,000; the National Guard was also increased from 30,000 to 50,000. Greek forces, which were advised by a U. S. military mission, were mobilized to some extent following the cessation of hostilities with the guerrillas in Oct. 1949. An infantry unit of 1,000 men and several aircraft were dispatched to Korea. In Dec. 1955, the navy had one cruiser, 3 fleet destroyers, 4 submarines and 19 frigates and escort craft.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is compulsory for all children between the ages of 6 and 14. Illiteracy was estimated at 23.5% in 1951. In 1952-53 there were 10,343 elementary schools with 931,171 pupils, 589 secondary schools with 215,393 pupils and 2 universities (located at Athens and Salonika), with 6,658 students.

About three-quarters of the population engages in agricultural pursuits, although only one-fifth of the land is arable. Most of the cultivated area is devoted to cereals: wheat (1955: 1,336,000 metric tons), barley (224,000 tons) and maize (288,000 tons). There are also olive trees, vines, tobacco (1954: 67,500 tons) and currants. Olive oil production in 1955 was about 116,000 tons. The principal fruits are oranges, lemons, figs, mandarins, apples and pears. In Sept. 1954, there were 904,000 cattle, 376,000 sheep and 603,000 hogs. Wool production in 1955 was about 6,000 metric tons (clean basis).

Development of large-scale Greek manufacturing is blocked by lack of coal resources and of capital. The most valuable products are textiles, chemicals and food items. Among other processed or manufactured products are olive oil, wine, spirits, flour, carpets, leather, cigarettes and building materials.

Postwar trade has been financed largely by U. S. aid. Recent figures are as follows (in millions of U. S. dollars):

	1953	1954	1955
Exports	132	152	183
Imports	294	330	382

Leading customers in 1955 were western Germany (25%), Italy (15%) and the U. S. (13%); leading suppliers, the U. S. (18%), western Germany (17%) and Italy

(12%). Chief exports in 1954 were tobacco (40%) and currants and raisins (18%).

The merchant marine plays a vital part in the national economy. On June 30, 1955, it totaled 350 ships (100 tons and over) aggregating 1,245,388 gross tons, according to *Lloyd's Register*.

Railway mileage in 1954 totaled 1,598; highway mileage in 1953 was 14,221. Reconstruction of the Greek transport system, financed by U. S. aid, was completed in 1949; it included extensive work on highways, port and dry-dock facilities, railways and bridges.

The 1955-56 budget estimated current revenue at 12,289,000,000 drachmas and expenditure at 12,039,000,000 dr. The surplus together with the proceeds of loans was to be used for capital projects.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** North central Greece, Epirus and western Macedonia all are mountainous. The main chain of the Pindus Mountains rises to 9,000 feet in places, separating Epirus from the plains of Thessaly. Greek Thrace is mostly a lowland region separated from European Turkey by the lower Maritsa River.

Among the many islands are the Ionian group off the west coast, 742 square miles in area; the Cyclades group to the south-east, 996 square miles; other islands in the eastern Aegean, including Lesbos, Samos and Khios, 1,486 square miles; and Crete, the fourth largest Mediterranean island, 3,199 square miles. Crete, largely mountainous, is about 160 miles in length, with a width varying from 7 to 35 miles.

The Dodecanese (area 1,035 sq. mi.), a group of 13 islands in the Aegean Sea near the coast of Asia Minor, were ceded to Greece by the 1947 Italian peace treaty and were formally transferred on March 7, 1948.

Greek minerals are varied but are exploited only moderately. Principal ones are lignite, iron ore, iron pyrites, magnesite, chromite, lead, bauxite, molybdenum, emery, marine salt and the country's famous marble.

A fifth of the country is forested, largely with pine, fir and oak. Resin and turpentine are main forest products. The principal sea product is sponges.

The Greek climate is varied but generally similar to that of other Mediterranean countries. The maritime regions have a temperate climate, with short winters and little snow or frost. In the uplands the winters are long and severe. Precipitation is heaviest in the mountains. Mean temperature at Athens is about 63°, with maximum of 99° in July and minimum of 31.5° in January; annual rainfall there is little more than 15 inches. The summer heat is moderated by sea breezes and cool north-easterly winds from the mountains.



## Guatemala (Republic)

### (República de Guatemala)

Area: 42,042 square miles.  
 Population (est. 1955): 3,263,000 (1950: Indian, 53.5%; mixed and other, 46.5%).  
 Density per square mile: 77.6.  
 President: Col. Carlos Castillo Armas.  
 Principal cities (census 1950): Guatemala, 284,922 (capital); Quezaltenango, 27,696 (coffee, sugar); Puerto Barrios, 15,332 (port); Mazatenango, 11,032 (coffee).  
 Monetary unit: Quetzal.  
 Language: Spanish.  
 Religion: Roman Catholic.

**HISTORY AND GOVERNMENT.** Once the site of the ancient Mayan civilization, Guatemala was conquered by Spain in 1524 and for the next 300 years was the major center of Spanish government in Central America. Guatemala was one of the founders of the Central American Union in 1823, and in 1839 set itself up as a republic. From 1898 to 1920, the dictator Manuel Estrada Cabrera ran the country, and from 1931 to 1944, General Jorge Ubico Castañeda was the "strong man." In July 1944, the National Assembly elected General Federico Ponce President, but he was overthrown in October, and in December Dr. Juan José Arévalo was elected as the head of a leftist regime which continued to press its reform program in the face of conservative resistance. He took office on March 15, 1945. Jacobo Arbenz Guzmán, administration candidate with pro-Communist leanings, won the Nov. 1950 elections and took office March 15, 1951. He was ousted by anti-Communist forces on June 27, 1954, and a military junta took over. Col. Carlos Castillo Armas, one of its members, was confirmed as President in a popular referendum held Oct. 10, 1954.

A new Constitution has been adopted to take the place of that of 1945, which provided that a President be elected every six years by direct vote and could not succeed himself immediately. Legislative power was vested in a unicameral National Assembly whose members are popularly elected for four-year terms, half the members being elected every two years. Guatemala has an army of about 6,000, plus 3,000 national police. It also maintains a small air force.

**SOCIAL AND ECONOMIC CONDITIONS.** Education, advanced under Ubico, is free and compulsory. Illiteracy (7 years and over) was 72.2% in 1950. In 1953, 3,537 primary schools had 191,330 pupils and 125 postprimary schools 17,251 pupils. The University of Guatemala at Guatemala City had 4,005 students in 1954.

Most of the ruling class is drawn from the 5 per cent of the population that is white. Spanish is the official language, but at least 18 Indian dialects are spoken. Indians are the chief labor supply.

Agriculture engages 90 per cent of Guatemalans. Coffee accounts for a fifth of the cultivated land and a large part of the exports. Recent foreign-trade data are as follows (in millions of quetzales):

	1953	1954	1955*
Exports*	88.9	95.7	98.7
Imports	79.5	86.3	104.3

\* Unadjusted for banana undervaluation.

In 1955 the U. S. took 74% of the exports and supplied 64% of the imports. Chief exports were coffee (76%) and bananas (10%). Imports included flour, petroleum products, drugs and textiles.

Guatemalan manufacturing is small and local. The country has 600 miles of public railway connecting the coasts, 280 miles of private railway and 4,800 miles of highways. Puerto Barrios, on the Atlantic side, is the main port of entry, and is linked by rail to the capital.

**NATURAL FEATURES AND RESOURCES.** **CLIMATE.** Most of Guatemala is mountainous, with many volcanic peaks. The northern part is the great plain of Petén, largely uncultivated and sparsely populated. The narrow Pacific slope, well watered and fertile, is the most densely populated and the most productive part of Guatemala.

Guatemala has deposits of gold, silver, lead, tin, copper, mercury, coal, antimony, salt, chromite and sulfur, but many of these minerals exist in insufficient quantity to justify exploitation, and only lead and chromite are produced commercially.

The country's vast forests, mostly in the Petén region, yield chicle for chewing gum, cinchona bark, a small amount of rubber, and dyewoods and cabinet woods, such as cedar, mahogany and logwood.

The climate is hot and humid on the coasts, with heavy rainfall (as high as 195 inches), but is temperate in the highlands.

## Haiti (Republic)

### (République d'Haïti)

Area: 10,748 square miles.  
 Population (est. 1954): 3,400,000 (Negro, 95%; mulatto, 5%).  
 Density per square mile: 316.3.  
 President: Paul E. Magloire.  
 Principal cities (census 1950)\*: Port-au-Prince, 142,840 (capital, chief port); Cap-Haïtien, 24,957 (seaport); Gonaïves, 13,534 (farming district); Les Cayes, 11,835 (seaport; coffee).

Monetary unit: Gourde.  
 Language: French.  
 Religion: Roman Catholic.

\* Cities proper, excluding surrounding communes.

**HISTORY.** Haiti, the only Negro republic in the Western hemisphere, occupies the western third of the island of Hispaniola, which was discovered by Columbus in 1492.

ts political past is stormy, and today it is the smallest and most thickly populated of the American republics—a nation beset by illiteracy and poverty.

After successive Spanish and French domination, Haiti became a kingdom in 1801 under Toussaint L'Ouverture, a Negro leader. He was later captured by the French and died in prison, but the kingdom lasted and declared its independence in 1804, becoming a republic in 1820. In 1822 Haiti took over all of Hispaniola, and carried on until 1843, when the eastern two-thirds of the island revolted and established the Dominican Republic. Today the island is the only one in the world containing two sovereign nations.

Decades filled with revolution, corruption and disease came to a bloody climax in 1911-15, when Haiti had seven presidents in four years. After the assassination of the last one, United States Marines moved in. By a 1916 treaty, the United States agreed to help administer the country until the Haitians proved themselves capable of orderly self-government. The last Marines left in 1934, but a U. S. fiscal expert continued to supervise customs until 1941. On January 11, 1946, President Elie Lescot was driven from the country by revolution, and a three-man military junta took over until the election of President Dumarsais Estimé on Aug. 16, 1946. He was ousted in 1950 and succeeded after new elections by Paul E. Magliore.

**GOVERNMENT.** Normally the President is elected for six years by two-thirds vote of the National Assembly. That body consists of a 37-member Chamber of Deputies, elected for four years by popular vote, and a 21-member Senate elected for six years. The Garde d'Haiti, about 5,000 strong, serves as army and police force.

**SOCIAL AND ECONOMIC CONDITIONS.** Most Haitians are descended from African slaves. Their illiteracy rate is estimated at 92 per cent. Although 1953 figures showed enrollment of 181,500 in primary and secondary schools, actual attendance is probably lower. Mulattoes—lightened by the blood of the early French settlers—dominate the political and social life of the nation. Many of them are Paris-educated. While the ruling classes speak pure French, most of the people speak the patois of Creole French, and many of them still practice the strange folk religion called voodoo.

Haiti is predominantly agricultural. Coffee, which makes up more than 50 per cent of Haitian exports, is the principal crop, followed by sisal, sugar cane, cotton, bananas and cacao. Coffee exports in 1954-55 amounted to 19,646 metric tons. Manufacturing is almost entirely for local consumption, but there are several sisal factories and sugar refineries.

Recent trade data are as follows (in millions of gourdes):

	1952-53	1953-54	1954-55
Exports	189.0	277.7	174.3
Imports	225.8	237.8	196.0

Leading exports in 1954-55 were coffee (66%), sisal (16%) and sugar (4%). Leading customers were the U. S. (49%), Belgium (14%) and Italy (9%); leading suppliers, the U. S. (65%), Canada (6%) and Germany (4%).

In 1953 Haiti had about 2,000 miles of improved road and about 180 miles of railway. International air service is provided by PAA and KLM.

Recent public finance data, in millions of gourdes:

	1953-54	1954-55	1955-56*
Revenue	161.1	191.0	128.2
Expenditure	175.0	189.4	128.2

\* Budget estimate.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Haiti, about the size of Maryland, is two-thirds mountainous, with the rest marked by great valleys, extensive plateaus and small plains. The most densely populated and productive region is the Cul de Sac plain, near Port-au-Prince.

Minerals, relatively unexploited, include gold, silver, iron, copper, antimony, tin, coal, nickel and gypsum. In 1943, a sizable bauxite deposit was found and signed over for U. S. development. Inland Haiti has forests of mahogany, pine, lignum vitae and other commercial woods.

The climate is hot on the coast, temperate in the mountains, with hurricanes frequent in the May-to-October rainy season. Port-au-Prince has a mean annual temperature of 81°. Annual rainfall in Haiti varies from about 20 to 100 inches.

## Honduras (Republic) (República de Honduras)

Area: 43,277 square miles.

Population (est. 1955): 1,660,000 (1945: mestizo, 89.9%; Indian, 6.7%; Negro, 2.1%; white, 1.3%).

Density per square mile: 38.4.

President: Julio Lozano.

Principal cities (census 1950): Tegucigalpa (including twin city of Comayagua), 72,385 (capital); San Pedro Sula, 21,139 (bananas); La Ceiba, 16,645 (seaport, bananas); Tela, 12,614 (seaport).

Monetary unit: Lempira.

Language: Spanish.

Religion: Roman Catholic.

**HISTORY AND GOVERNMENT.** Columbus discovered Honduras on his last voyage in 1502; it was a Spanish colony and part of Guatemala until 1821, the year of the general Central American revolt against Spain. Honduras declared its independence in 1838, and has been troubled by revolution

and war ever since. American Marines intervened in 1903 and 1923. In 1931, 1932 and 1937, major revolutions were crushed by force. The Nicaraguan-Honduras boundary dispute of 1937 almost caused war, and in April 1945, the country was invaded from Guatemala by a group of Honduran exiles, who were suppressed.

Constitutional rule ceased on Dec. 6, 1954, when the newly elected Congress was unable to constitute itself. All powers were assumed by Julio Lozano, who is advised by a Council of State. Elections for a Constituent Assembly were scheduled to be held in 1956.

Military service is compulsory. The army is estimated to be slightly under the 2,500 strength agreed upon by the Central American states.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is free and supposedly compulsory, but less than 25 per cent of the children go to school. The government is trying to reduce illiteracy, which was 64.8% according to the 1950 census. In 1953-54, 2,214 primary schools had 117,292 pupils; secondary, normal and commercial schools had 6,847 students and the National University at Tegucigalpa, 843 students.

The Honduran economy depends on bananas, which usually account for more than 50 per cent of the nation's exports. The biggest plantations are along the northern coast. Exports in 1953-54 totaled 11,043,711 stems, more than 90 per cent produced by two U. S. companies. Other crops are corn, coffee, rice, henequen, tobacco and coconuts. Honduras also is an important source of sarsaparilla. Cattle raising and dairy farming flourish on rich pasture lands. Manufacturing is small and local.

Recent foreign trade data are as follows (in millions of lempiras):

	1951-52	1952-53	1953-54
Exports*	68.9	108.7	133.8
Imports	109.2	114.4	98.5

\*Unadjusted for banana undervaluation.

In 1953-54 the U. S. took 77% of the exports and supplied 69% of the imports. Leading exports were bananas (59%), coffee (19%), silver (7%) and lumber (5%).

Honduras' railroads—920 miles—are almost entirely owned by fruit companies and used to transport bananas; they are confined to the northern coastal area.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Honduras, in the north central part of Central America, has a 400-mile Caribbean coast-line and a 40-mile Pacific frontage. Generally mountainous, it has fertile plateaus and river valleys and narrow coastal plains.

In 1953-54 Honduras exported 5,216,283 troy oz. of silver, 49,516 oz. of gold—the

most important mineral products. Copper and iron exist in paying quantity but are undeveloped. The country is noted for rich forest resources, particularly the tropical hardwoods. In 1953-54, 410,200 bd. ft. of mahogany logs and lumber and 45,542,000 bd. ft. of pine were exported.

The climate is oppressive in the coastal lowlands, pleasant in the interior highlands. At Tegucigalpa, maximum temperature is about 90° (in May), and minimum 50° (December).

## Hungary (Republic)

Area: 35,905 square miles.

Population (estimated 1955): 9,808,000 (Magyar, German, Slovak).

Density per square mile: 273.2.

Chairman of Presidium: István Dobi.

Prime Minister: Andras Hegedus.

Principal cities (est. 1954): Budapest, 1,781,085 (capital, Danube port); Miskolc, 135,780 (industrial center); Debrecen, 113,248 (livestock); Szeged, 88,590 (textiles, wheat); Pécs, 87,140 (farming).

Monetary unit: Forint.

Languages (census 1949): Hungarian, 98.7%; Slovak, .3%; German, .2%; Rumanian, .2%; others, .6%.

Religions (est. 1949): Roman Catholic, 70.6%; Calvinist, 22.8%; Lutheran, 3.3%; Jewish, 1.9%; Greek Orthodox, .4%; others, 1%.

**HISTORY AND GOVERNMENT.** About two thousand years ago, Hungary was part of the Roman provinces of Pannonia and Dacia on the empire's borders. In A.D. 894 it was invaded by the Magyars, who founded a kingdom. Christianity was accepted during the reign of Stephen I (St. Stephen) from 997 to 1083. The peak of Hungary's great period of medieval power came in 1342-82 under King Louis the Great (Louis I) of Anjou, whose dominions touched the Baltic, Black and Mediterranean seas. When the Turks smashed a Hungarian army in 1526, western and northern Hungary accepted Hapsburg rule to escape Turkish occupation. Transylvania became independent under Hungarian princes. Intermittent war with the Turks was waged thereafter for some years.

After the suppression of the 1848 revolt against Hapsburg rule led by Louis Kossuth, the dual monarchy of Austria-Hungary was set up in 1867.

The dual monarchy was defeated with the other Central Powers in World War I, and the new Hungary underwent hard times. First there was a short-lived Socialist republic in 1918. The chaotic Communist rule of 1919 under Béla Kun ended with the Rumanians occupying Budapest on Aug. 4, 1919. When the Rumanians left, Admiral Nicholas Horthy entered the capital with a national army. The Treaty of Trianon of June 4, 1920, cost Hungary 75 per cent of its land and more than 50 per



at of its population. Meanwhile, the National Assembly had restored the legal continuity of the old monarchy; and on March 1, 1920, Horthy was elected Regent. After 1920, Hungary was in effect ruled by its great land owners, but the turn came in 1932 with the accession of General Julius de Gömbös, a pro-Fascist, as Prime Minister. Under Gömbös and his successors (Kaloman Daranyi in 1936 and Bela Imredy in 1938) co-operation with Italy and Germany was Hungary's guiding principle. Hungary signed the anti-Comintern pact on Jan. 13, 1939, and the Three Power Pact of Germany, Italy and Japan on Nov. 20, 1940. As inducement and reward for these actions, Hungary got part of Slovakia and all of Ruthenia from Czechoslovakia in 1938 and 1939, and Northern Transylvania from Rumania in 1940.

Following the German invasion of Russia on June 22, 1941, Hungary joined the Axis against the U.S.S.R., but the war was not popular and Hungarian troops were almost entirely withdrawn from the Eastern front by May 1943. The government of Nicholas von Kállay was overthrown March 19, 1944, and German occupation troops set up a puppet government under Admiral Horthy's appeal for an armistice with advancing Soviet troops had resulted in his overthrow on Oct. 16. The Horthy regime soon fled the capital, however, and on Dec. 23 a provisional government was formed in Soviet-occupied eastern Hungary. On Jan. 20, 1945, it signed an armistice in Moscow. On Feb. 1, 1946, the National Assembly approved a constitutional law abolishing the 1,000-year-old monarchy and establishing a republic. Through its control of the police, the Communist party forced Prime Minister Ferenc Nagy to resign on May 30, 1947, and secured the appointment of a left-wing Smallholder, Lajos Dinnyes, in his place. The Communists emerged as the longest single party in national elections held Aug. 31, 1947. President Zoltan Tildy resigned July 30, 1948, and was replaced by Communist Arpad Szakasits. Istvan Dobi, also a left-wing Smallholder, replaced Dinnyes on Oct. 10, 1948.

The Communist regime devoted itself to the transformation of Hungary into a people's democracy modeled after the U.S.S.R. Szakasits was replaced by Sandor Matyas Rakosi became Prime Minister Aug. 1, 1952, and Dobi became Chairman of the Presidium. Rakosi stepped down in favor of Imre Nagy, another Communist, on July 4, 1953. Nagy was ousted and replaced by Andras Hegedus on Apr. 18, 1956.

The Soviet-type Constitution adopted by Parliament on Aug. 18, 1949 declared Hun-

gary to be a "people's republic." The supreme organ of state control was declared to be the Parliament, with deputies elected every 4 years by direct vote. When Parliament is not in session, power is exercised by the Presidium headed by a Chairman. Executive power is vested in the Cabinet headed by the Premier.

Only the Communist-controlled, left-wing coalition was represented in the National Assembly after elections held May 15, 1949, in which only one slate of candidates was presented.

**PEACE TREATY OF 1947.** The final peace treaty, which took effect Sept. 15, 1947, fixed Hungary's frontiers as they were on Feb. 1, 1938, except that a small bridgehead on the south bank of the Danube opposite Bratislava was ceded to Czechoslovakia. Hungary was to pay reparations of \$300,000,000 over a period of 8 years, \$200,000,000 to the Soviet Union and \$100,000,000 to Yugoslavia and Czechoslovakia. The treaty also provided freedom of navigation on the Danube for nationals of all states.

The strength of Hungarian armed forces was fixed by the treaty as follows: army, 65,000, including frontier, anti-aircraft artillery and river flotilla personnel; air force, 90 planes with a personnel of 5,000. Actual strength of the army by 1956 was thought to be about 280,000.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is state-controlled and is compulsory between the ages of 6 and 14. Parochial schools were nationalized in 1948. Illiteracy (7 years and over) was estimated at 5% in 1949. In 1954 there were 6,185 elementary schools with 1,208,000 pupils and 405 secondary schools with 162,500 pupils. The 21 institutions of higher learning (including 5 universities) had 47,500 students.

Agriculture is the basis of Hungarian economic life, engaging more than half the population. The Land Reform Act issued in March, 1945, provided for the confiscation of all estates over 1,500 acres; about 8,000,000 acres were divided among some 500,000 families. Cereals grown in the fertile Danubian plains are the chief crops. Leading crops in 1953 were wheat (2,150,000 metric tons), potatoes (2,350,000 tons), barley (700,000 tons), rye (725,000 tons), oats (200,000 tons), maize (2,450,000 tons) and sugar beets.

In addition, cultivation of vines, fruit and garden produce is important; the famous Tokay wine is produced on the southern slopes of the Hegyalja in the northeast. Wine production averages 100,000,000 U. S. gallons annually (1955: 118,700,000 U. S. gallons).

Horse-breeding is a traditionally important branch of agriculture. Hungarians have a great love for horses, and their ex-

cellent breeds were exported in large numbers before World War II. Livestock in 1955 included 1,983,000 cattle, 5,800,000 hogs, 1,032,000 sheep and 550,000 horses.

The dominant industries are all based on agriculture, with flour milling in first place, followed by sugar refining, brewing and canning. The second group of industries make hardware and machinery. Most of the machine industry is concentrated in Budapest and Győr. Cotton leads the textile industry, especially in Budapest, which is also a center of woolen manufactures. Hemp and flax weaving are important. An estimated 885,000 persons were employed in industry in 1954. Almost all industrial facilities were nationalized under laws passed in 1946, 1948 and 1949. In addition, the Soviet Union took over all German-owned plants as reparations, and in 1946 Soviet-Hungarian companies were formed to exploit bauxite, petroleum, and air and river navigation; the Soviet shares in these companies were sold to Hungary in Nov. 1954.

Exports in 1950 (most recent year of available figures) were valued at \$257,000,000 and imports at \$265,000,000. Chief destinations of exports were Poland, Czechoslovakia, Rumania and Bulgaria, 36.6%, and the U.S.S.R., 25.7%; chief suppliers, Poland, Czechoslovakia, Rumania and Bulgaria 36.6%, and the U.S.S.R., 22.7%. Leading exports included grain, textiles, live animals and animal products, and machinery.

The focal point in the country's transportation system is the Danube River, navigable for 423 miles in Hungary. The nation's central location makes it the center of an important transit trade; its prewar river fleet was the largest on the Danube. Railroad mileage in 1951 totaled 7,100; highway mileage in that year, 15,976.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Most of Hungary is a fertile, rolling plain lying east of the Danube, and drained by the Danube and the Tisza Rivers. In the extreme northwest is the Little Hungarian Plain. South of that area is Lake Balaton, 250 square miles, the largest lake of western and central Europe.

While Hungary generally is mineral-poor, it has an estimated 250,000,000 tons of bauxite—about 20% of the world's known reserves. Production in 1954 was estimated at 1,260,000 metric tons. The coal is of low quality and is insufficient to meet domestic needs; production in 1954 was estimated at 1,900,000 metric tons and that of lignite at 20,100,000 tons. Other minerals include iron ore, manganese and gold. Petroleum production in 1954 was about 9,173,000 barrels.

About 12 per cent of Hungary is forested, but the products are of little importance.

There are valuable fisheries in Lake Balaton and on the Danube.

Hungary's mean annual temperature ranges from 48° in the north to 52° in the south. Precipitation varies from 30 to 40 inches in the Bakony Forest to less than 15 inches in the east; most of the rainfall falls in May and June. High summer temperatures and a long autumn are favorable to agriculture.

## Iceland (Republic) (Island)

Area: 39,768 square miles.\*  
Population (est. Dec. 31, 1955): 159,000 (almost entirely Icelandic).  
Density per square mile: 4.0.  
President: Asgeir Asgeirsson.  
Prime Minister: Hermann Jonasson.  
Principal city (est. 1955): Reykjavik, 63,666 (capital and only large city).  
Monetary unit: Króna.  
Languages: Icelandic, Danish.  
Religion: Evangelical Lutheran.

\* Including several off-shore islands.

**HISTORY AND GOVERNMENT.** Iceland was first settled shortly before 900, mainly by Norse. A Constitution drawn up about 1874 created a form of democracy and provided for an Althing, or General Assembly, now the oldest legislative body in the world. In 1262-64, Iceland came under Norwegian-Danish rule. In 1874 Iceland obtained their own Constitution. In 1918 Denmark recognized Iceland as a separate state with unlimited sovereignty, but still nominally under the Danish King. On June 17, 1944, after a popular referendum, the Althing proclaimed Iceland a completely independent republic.

The British occupied Iceland in 1940, immediately after the German invasion of Denmark. In 1942, the United States took over the burden of protection. Iceland refused to abandon its neutrality in World War II, and thus forfeited charter membership in the United Nations, but it was operative with the Allies throughout. Iceland joined the North Atlantic Treaty Organization in 1949, and in May 1951, U. S. troops again landed at Iceland's request to aid in its defense preparations. The thing voted Mar. 27, 1956, for the withdrawal of U. S. forces.

Constitutionally, the President of Iceland is elected for four years by popular vote. Executive power of the state resides in the Prime Minister and his Cabinet. The thing is composed of two houses, each with 17 members and the other with each has equal constitutional power. Iceland has no army or navy.

**SOCIAL AND ECONOMIC CONDITIONS.** Illiteracy is virtually unknown in Iceland. Education is compulsory from 7 to 15, and mobile schools are sent traveling through

are sparsely settled areas. When the University of Iceland, established in 1911, needed new buildings in 1935, the government licensed it to conduct a national lottery to raise the funds. The high number of scholarships and the low tuition fees make higher education virtually free.

Iceland publishes more books, newspapers and magazines per capita than any country in the world. Its language, Icelandic, has dialects and has changed little through centuries. In addition, Danish is widely understood and spoken. The Evangelical Lutheran Church is state-supported, but there is complete religious freedom.

Approximately six-sevenths of Iceland is productive, and only one-fourth of one per cent is under cultivation. With about 90 per cent of the population engaged in farming, sheep raising is the most important branch of this industry. Hay, potatoes and turnips are the principal crops.

Recent trade data are as follows (in millions of krónur):

	1953	1954	1955
Exports	706.3	845.9	847.9
Imports	1,111.3	1,130.4	1,264.3

Fish and fish products accounted for 50 per cent of the exports in 1955. Leading customers were the U.S.S.R. (18%), the U. S. (20%) and Britain (8%); leading suppliers, the U. S. (23%), U.S.S.R. (14%) and Britain (11%).

Iceland has no railways. Highways total about 5,100 miles. In Oct. 1955, the merchant marine had 568 vessels (12 tons and over) aggregating 97,151 gross tons.

**NATURAL FEATURES AND RESOURCES:** CLIMATE. Iceland, a bleak, volcanic island about the size of Kentucky, has maximum dimensions of 298 by 194 miles; it is mostly level, high, rugged and barren. It is one of the world's most volcanic regions.

Small fresh-water lakes are found throughout the island, and there are many natural oddities, including hot springs, geysers, sulfur beds, canyons, waterfalls and swift rivers. More than 13 per cent of the sea is covered by snowfields and glaciers, and most of the people live in the 7 per cent of the island comprising fertile coastal lands. Vegetation is of the Arctic type, mostly stunted. Except for peat and fisheries, Iceland has no natural resources.

About one-sixth of the people are engaged in fishing, and fish and fish products make up the bulk of Iceland's exports. The annual catch averages approximately 350,000 metric tons (1955: 408,952 tons). Many European fishing craft visit Iceland's fisheries, which lead the world in cod and are important for herring, plaice and halibut. The Gulf Stream modifies Iceland's climate to make it much like that of southern Canada, though with longer winters and shorter summers. The mean annual tem-

perature at Reykjavik is 39.4°, with January the coldest month (34.2°) and July the warmest (51.6°). Rainfall varies from about 12 inches annually to 85.

## Indonesia (Republic)

### (Republik Indonesia)

Area: 575,893 square miles.\*

Population (census 1955): 77,654,492\* (Indonesian, except for an estimated 1,500,000 Chinese and 100,000 Europeans in 1951).

Density per square mile: 134.8.

President: Achmed Sukarno.

Premier: Ali Sastroamidjojo.

Principal cities (est. 1955): Jakarta (Batavia), 1,851,531 (capital); Bandung, 805,071 (commercial center, west Java); Semarang, 366,208 (seaport, central Java); Jogjakarta, 268,252 (former Republican capital); Medan, 310,000 (rail center).

Monetary unit: Rupiah.

Languages: Bahasa Indonesia (Malay) (official), Dutch, Javanese, Sundanese, Madurese.

Religions: Mohammedan (predominant), Christian (about 2,500,000), Brahmin, Buddhist.

\* Excluding Netherlands New Guinea.

**HISTORY.** The sovereign state of Indonesia, a group of islands with a total area more than twice that of Texas, constitutes one of the world's richest natural areas. These islands—Sumatra, Java, Madura, central and southern Borneo, Celebes and the Moluccas—would reach from San Francisco to Honolulu if their extent was transposed to the eastern Pacific. They have great wealth in tin, rubber, spices, oil, quinine and copra.

During the first few centuries of the Christian era, most of the islands came under the influence of Hindu priests and traders who spread their culture and religion. Moslem invasions began in the 13th century, and most of the area was Moslem by the 15th century. Portuguese traders arrived early in the 16th century but were ousted by the Dutch about 1595. After Napoleon subjugated the Netherlands homeland in 1811, the British seized the islands but returned them to the Dutch in 1816. In 1922 the islands were made an integral part of the Netherlands kingdom.

In World War II, the Japanese military occupation with nominal native self-government continued until Aug. 1945, except in outlying parts of New Guinea and Borneo. About the time of the Japanese surrender, a self-styled Indonesian Republic headed by Achmed Sukarno sprang up and took over effective control of parts of Sumatra and Java. Allied forces, mostly British Indian troops, moved in, and fighting between them and the nationalists continued until Nov. 15, 1946, when Dutch-native negotiations resulted in a draft agreement initialed at Linggadjati, near



**Cheribon.** The agreement was formally signed by Dutch and Indonesian authorities on March 25, 1947.

This agreement contemplated the formation by Jan. 1, 1949, of a Netherlands-Indonesian Union, consisting on the one hand of the Netherlands, the Netherlands Antilles and Surinam and on the other of the United States of Indonesia, which was to be a sovereign nation composed of three equal states—the Republic of Indonesia, East Indonesia and Borneo. Differences of interpretation ensued, and the Dutch resorted to force on July 20, 1947. Both sides issued cease-fire orders on Aug. 4, 1947, in response to a call from the U. N. Security Council.

The U. N. named a Good Offices Commission under whose auspices the Dutch and the Republic signed another truce on Jan. 17, 1948, aboard the U.S.S. *Renville*. A provisional federal government for the whole area was installed on Mar. 9, 1948, but difficulties between the Dutch and the Republic continued. On Dec. 18, 1948, Dutch forces instituted "police" action against Republican areas and seized the Republican leaders. Hostilities ceased Jan. 1, 1949, following U. N. intervention. On May 7, the Dutch agreed to return the exiled Republican regime to central Java.

On Nov. 2, 1949, Dutch and Indonesian leaders agreed upon the terms of union between the Netherlands and Indonesia. Dr. Sukarno was elected President of the federation on Dec. 16 by representatives of the Indonesian states, and the first all-Indonesian Cabinet was formed with Mohammed Hatta as Premier. The transfer of sovereignty took place at Amsterdam on Dec. 27, 1949.

The principle of federalism was discarded on Aug. 4, 1950, and Indonesia became a unitary state. The attaining of independence was followed by repeated financial, economic and political crises and weak Cabinets. Relations with the Netherlands were strained by a dispute over the status of Netherlands New Guinea and proposals for the termination of the union; the latter finally was dissolved Aug. 11, 1954.

**GOVERNMENT AND DEFENSE.** Indonesia is a republic of 10 provinces under the Constitution promulgated on Aug. 15, 1950. Legislative power is vested in the 260-member Parliament. The President and the Premier and his Cabinet exercise executive power. A Constituent Assembly to draft a new Constitution was elected commencing in Dec. 1955.

The republic's first general elections, held between Sept. 29 and Nov. 30, 1955, divided the 260 seats as follows: Nationalist, 57; Masjumi (Moslem), 57; Nahdatal Ulama (Moslem Schoolmen's League), 45; Communist, 39; others, 62.

Military service is not compulsory. The army is to be stabilized at 300,000 men. The navy (1955) had 1 destroyer, 4 corvettes, 6 patrol ships and many smaller craft.

**SOCIAL AND ECONOMIC CONDITION.** School attendance is not compulsory. Literacy was officially estimated at 47% in 1952. In 1955 there were 29,629 elementary schools with 6,316,233 pupils, 1,525 secondary schools with 385,365 pupils. The 23 institutions of higher learning had 19,063 students.

The islands of Java and Madura, which only nine per cent of the area, have more than two-thirds of the population, and are among the most densely settled areas in the world (more than 1,000 per sq. mi.). The people, including about 137 races and tribes, are mainly of Malayan stock, with the Javanese the most advanced.

Agriculture engages about 70 per cent of the adult males. Rich in a variety of crops, the islands prior to World War II produced about 31 per cent of the world's copra, 10 per cent of its rubber, 83 per cent of its pepper, and nearly all of its quinine. The big-estate agriculture on Java and Sumatra is devoted mainly to export. The rest is subsistence agriculture. Rice is the staple food and chief crop; production in 1955 was 14,252,659 metric tons (paddy). Major plantation crops, with 1955 production in metric tons, are rubber, 731,040 (estates only) tea, 43,490; coffee, 15,830; cinchona bark, 2,644; palm oil, 165,830; palm kernels, 41,940; sugar, 856,335.

Others are cacao, spices, agave fiber, copra and kapok. In addition to rice, the chief food crops of the Republic are maize (1,882,054 tons in 1955), cassava, sweet potatoes, peanuts and soybeans.

In 1952 there were an estimated 4,560,000 cattle, 2,230,000 sheep, 1,099,000 horses, 2,851,000 buffalo and 549,000 ponies.

Industry, especially in Java, developed rapidly after 1930. In addition to industries connected with the processing of the rich natural products, there were established chemical works, textile and paper mills, soap factories, breweries, shipyard, a Goodyear tire and rubber plant and General Motors assembly plant.

Indonesia is primarily an importer of consumer and capital goods and an exporter of mineral and plantation products. Recent trade data are as follows (in millions of rupiahs):

	1953	1954*	1955
Exports	9,579	9,759	10,000
Imports	8,718	7,172	6,800

\* Preliminary.

Chief exports in 1955 were rubber (46%), petroleum and products (23%), tin (6%), copra (4%) and tea (3%). Leading customers were Singapore (20%), the U.

3%), the Netherlands (16%) and Britain (10%); leading suppliers, the U. S. (3%), Japan (14%), the Netherlands (2%) and Germany (10%).

The highway network totaled about 4,000 miles in 1953; and in 1954 there were about 4,200 miles of railway, of which about three-fourths were in Java and a fourth in Sumatra. According to *Lloyd's Register*, the merchant marine had 142 ships (100 tons and over) aggregating 101,446 gross tons on June 30, 1955.

Recent financial data are as follows (in millions of rupiahs):

	1953	1954	1955*
Revenue	13,591	11,539	13,556
Expenditure	15,659	15,141	17,053

Budget estimate.

The public debt, consolidated and floating, was reported on Dec. 31, 1955, at \$643,000,000 rupiahs, of which 8,567,000,000 rupiahs represented the floating debt.

**NATURAL FEATURES AND RESOURCES:** CLIMATE. A backbone of high mountain ranges with many snow-capped peaks extends throughout the main islands of the archipelago. Earthquakes are frequent, and there are many active volcanoes, 90 of them in Sumatra. Borneo is heavily forested.

Petroleum is the principal mineral product of modern Indonesia. The fields, in Sumatra, east Borneo and east Java, produced 11,790,274 metric tons (about 88,500,000 barrels) in 1955.

The tin industry attained prewar levels more rapidly than others after World War II. Production in 1955 was 33,901 metric tons. Other important minerals include bauxite (1955: 263,675 metric tons); coal (14,071 tons), salt, nickel and manganese. Deposits of uranium are reported.

Forests, covering much of the area except Java, yield such products as timber, rattan, bamboo, gum, wild rubber, gutta-percha and quinine. Most valuable timber is teak, found mostly in east Java. Ebony, sandalwood and ironwood also are cut.

The climate throughout the group is equatorial and monsoonal, with little variation of temperature (yearly average about 79°; at Batavia, 79°) and rainfall averaging over 100 inches a year. In Sumatra and Java the hot and rainy season usually lasts from May to October; December and January are relatively cool and dry; February, March and April, hot and dry.

## Iran (Kingdom)

Area: 636,293 square miles.  
Population (est. 1955)\*: 21,146,000 (Iranian, Kurdish, Azerbaijani).  
Density per square mile: 33.2.  
Ruler: Mohammed Reza Pahlavi.

Prime Minister: Hussein Ala.

Principal cities (est. 1950): Teheran, 618,976 (capital); Tabriz, 279,168 (manufacturing center); Isfahan, 196,134 (cotton, tobacco); Meshed, 191,794 (Moslem shrine); Hamadan, 123,931 (western trading center).

Monetary unit: Rial.

Languages: Iranian (Persian), Kurdish, Azerbaijani.

Religions: Moslem (Shiah), about 90%; Moslem (Sunnii), about 5%; Armenian; Jewish; Nestorian; Parsi.

\* U.N. estimate; no census ever taken.

**HISTORY.** Oil-rich Iran, roughly one-fifth the size of the United States, was called Persia before 1935. Its key location blocks the lower land gate to Asia, and also stands in the way of traditional Russian ambitions for access to the Indian Ocean. In modern times, Iran has drawn Big Power interest because of its especially rich oil deposits.

Iran's history is a long one of rising and falling dynasties. After periods of Assyrian, Median and Achaemenidian rule, Persia became a powerful empire under Cyrus the Great, reaching from the Indus to the Nile at its zenith in 525 B.C. It fell to Alexander in 331-30 B.C., to the Selucidae in 312-202 B.C., and to the Parthians about 130 B.C. A native Persian regime arose about A.D. 224, was weakened fighting the Turks, and fell to the Arabs in 637. In the 12th century the Mongols took their turn ruling Persia, and in the early 18th century the Turks and Russians occupied it. In modern times, Russia, Turkey, Britain, France and most recently, the United States all have taken a very keen competitive interest in Iran.

An Anglo-Russian convention of 1907 divided Iran into two spheres of influence. British attempts to impose a protectorate over all of Iran were defeated in 1919. On Feb. 26, 1921, General Reza Pahlavi seized the government and was elected hereditary Shah in 1925. Subsequently he did much to modernize the country and abolished all foreign extraterritorial rights.

Increased pro-Axis activity led to Anglo-Russian occupation of Iran in August 1941 and deposition of the Shah in favor of his son, Mohammed Reza Pahlavi.

In November 1945, a Soviet-inspired autonomist movement won control of Azerbaijan, Iran's northwest province. To protect their advantage, the Russians kept troops in that area past the treaty evacuation date of March 2, 1946. The Iranians promptly protested this breach of agreement to the United Nations. The Russians evacuated their troops on May 6.

All Razmara became Premier June 26, 1950, and pledged to restore efficient and honest government, but he was assassinated Mar. 7, 1951. Mohammed Mossadegh

took over April 29. The next day, Parliament completed action on a bill nationalizing the oil industry. The action was taken over strong British protests, but Britain evacuated the oil refineries Oct. 3, 1951. Subsequent British-Iranian negotiations failed. Loss of oil revenue placed Iran in a precarious economic position.

Mossadegh was ousted Aug. 19, 1953, in a *coup d'état* led by Fazollah Zahedi, whom the Shah had named Premier. The oil dispute was settled in Aug. 1954. Hussein Ala succeeded Zahedi as Premier on Apr. 7, 1955.

**GOVERNMENT AND DEFENSE.** Iran is a constitutional monarchy, and the Shah has the usual powers of the head of a parliamentary state. Executive power is exercised by a Cabinet headed by the Prime Minister, who is appointed by the Shah and is responsible to Parliament, the lower house of which (Majlis) has 136 popularly elected members and the upper house of which (Senate) has 60 members, half of whom are appointed by the Shah.

Military service is compulsory; the initial training period is 2 years. The army, modernized and reorganized by Riza Pahlavi, father of the present Shah, consists of about 130,000 men. The air force has several hundred planes, and the navy several small craft in the Persian Gulf. There is also a U. S.-trained police force numbering 20,000.

**SOCIAL AND ECONOMIC CONDITIONS.** Education has made good progress in the 20th century, supplanting the old and essentially religious system. In 1953-54 there were 5,959 primary schools with 790,200 pupils; secondary schools (333 in 1950) had 119,300 students in 1953-54. There are universities at Teheran and Tabriz. Illiteracy is high.

Iran is predominantly agricultural. Large estates are numerous, and irrigation is common, especially on the central plateau. The principal crops are wheat (est. 1955: 2,500,000 metric tons) and barley (880,000 tons). Rice production, confined largely to the Caspian provinces, was estimated at 565,000 tons (paddy) in 1954.

Other crops include grapes, dates, apricots, tobacco, tea, cotton, sugar beets and corn. There are extensive grazing lands. Wool production in 1955 was estimated at 10,000 metric tons (clean); in 1954 there were an estimated 17,750,000 sheep.

Iran must still import many manufactured necessities, but several new factories were established by the government after 1925, including sugar plants, rice and oil mills, textile factories, a cement factory, copper smelter, glycerine factory and small arms factory. Both sugar and tobacco are government monopolies. The manufacture of carpets, for which Iran is famous, is a valuable industry.

**Foreign-trade data (trade years beginning March 21) in millions of U. S. dollars**

	1951-52	1952-53	1953-54
Exports	288.2	73.9	91.5
Imports	176.5	117.1	171.5

In 1953-54 the leading customers were the U. S. and Canada (23%), Germany (21%), and other continental European Payments Union countries (16%); leading suppliers, Germany (21%), other continental EPU countries (25%) and the U. S. and Canada (18%). The principal exports in 1952-53 were cotton (17%) and rice (16%).

In 1953 there were about 44,000 miles of roads and about 1,600 miles of railways with more under construction.

The budget for 1955-56 forecast revenue of 12,065,648,000 rials and expenditure of 13,591,302,000 rials.

**NATURAL FEATURES AND RESOURCES.** **CLIMATE.** Iran is, in general, a plateau averaging 4,000 feet elevation. In addition there are maritime lowlands along the Persian Gulf and the Caspian Sea. The Elburz Mountains in the north rise to 18,603 feet at Mt. Demavend. From north to south, the country is crossed by a desert 800 miles long.

Considerable mineral wealth exists, but only oil is exploited commercially. The principal field, near Shushar in the southwest, was worked until 1951 by the Anglo-Iranian Oil Company. The latter's concession began in 1901 and was to run until 1993, but its properties were nationalized by the Iranian government in April, 1951. Production in 1950 was 31,750,000 long tons (about 240,000,000 barrels). The refinery at Abadan processed 24,855,171 tons of oil in 1950. Production under Iranian control was negligible. Under an agreement signed Sept. 19, 1954, Iran's oil is being produced, refined and marketed by a consortium of western oil companies, with 50% of profits going to Iran. The consortium began production Oct. 29, 1954, and during 1955 produced 15,772,000 long tons (about 120,180,000 barrels).

Deposits of uranium have been reported in Iran.

The main forest belt on the northern Elburz slope supplies railroad ties, charcoal and firewood. Gums are the most valuable forest product. Fisheries are worked in the Persian Gulf and the Caspian Sea.

The central plateau is hot in summer and very cold in winter, but the Caspian area has a sub-tropical climate. Mean temperatures vary at Teheran from 35° in January to 85° in July (yearly average 62°); at Bushire, on the Persian Gulf, from 55° in January to 90° in July and August (average 75°). Rainfall is light and variable (4 to 20 inches or more annually at Teheran).



## Iraq (Kingdom)

Area: 171,599 square miles.\*  
 Population (est. 1954): 4,948,000  
 Arab, 75%; Kurdish, 15%; Iranian, 5%; others, 6.25%).  
 Density per square mile: 28.8.  
 Ruler: King Faisal II.  
 Prime Minister: Nuri es-Said.  
 Principal cities (census 1947, cities proper): Baghdad, 364,049 (capital); Mosul, 3,273 (oil); Karbala, 122,719 (religious center); Basra, 94,000 (chief port).  
 Monetary unit: Dinar.  
 Languages: Arabic, Kurdish.  
 Religions (census 1947): Moslem, 93.6%; Christian, 3.1%; Jewish, 2.5%; others, .8%.  
 \* Includes desert area of 80,583 square miles.

**HISTORY.** Iraq, a triangle of mountains, desert and fertile river valley less than half the size of Texas, is bounded east by Iran, north by Turkey, west by Syria and Jordan, and south by Saudi Arabia. From earliest times it has been known as Mesopotamia—the land between the rivers—for it embraces a large part of the alluvial plains of the Tigris and Euphrates.

An advanced civilization existed in Mesopotamia by 4000 B.C. Sometime after 2000 B.C. it became the center of the ancient Babylonian and Assyrian empires. It was conquered by Cyrus the Great of Persia in 538 B.C., and by Alexander in 331 B.C. After an Arab conquest in A.D. 637-40, Baghdad became capital of the ruling caliphate. The country was cruelly pillaged by the Mongols in 1258, and during the 16th, 17th and 18th centuries was the object of repeated Turkish-Persian competition.

Nominal Turkish suzerainty imposed in 1838 was replaced by direct Turkish rule in 1831. In World War I an Anglo-Indian force occupied most of the country, and Britain was given a mandate over the area in 1920. The British recognized Iraq as a kingdom in 1922 and terminated the mandate in 1932, when Iraq was admitted to the League of Nations. In World War II, Iraq generally adhered to its 1930 treaty of alliance with Britain, but in 1941 British troops were compelled to put down a pro-Axis revolt led by Prime Minister Rashid Ali. Iraq became a charter member of the Arab League in March 1945, and Iraqi troops took part in the Arab invasion of Palestine in 1948. The 1930 treaty of alliance with Britain was terminated in April 1955 and replaced by a defense co-operation agreement.

King Faisal II, born on May 2, 1935, succeeded his father, Ghazi I, who was killed in an automobile accident on April 4, 1939. The King's uncle, Abdul-Ilah, is heir apparent.

**GOVERNMENT AND DEFENSE.** Under the 1924-25 Constitution, Iraq is a hereditary monarchy with a two-house Parliament. The Senate is named by the King for a term of eight years; the 138-member

Chamber of Deputies is elected popularly for four years. Executive power is vested in a Council of Ministers, headed by the Prime Minister, who is appointed by the King.

Military service is compulsory, with an initial training period of 1½ to 2 years. The British-trained police number about 21,000.

**SOCIAL AND ECONOMIC CONDITIONS.** Primary education is free and nominally compulsory. Secondary education is neither free nor compulsory. There are no universities. In 1953-54 there were 1,549 elementary schools with 280,378 pupils and 197 intermediate and secondary schools with 46,463 students; 12 institutions of higher learning had a combined enrollment of 5,255.

The chief economic activity is agriculture, dependent upon irrigation and confined to the valleys of the Tigris and Euphrates. Iraq supplies about 80 per cent of the world's dates (1955: 320,000 metric tons). Chief among the cereal products of Iraq are barley (1955: 768,000 metric tons), wheat (483,000 tons), rice, sorghum, maize and millet. Many fruits and some tobacco and cotton are grown. Grazing is the principal occupation of the many nomadic and seminomadic tribes. Livestock estimates included (1953-54) 10,000,000 sheep, 1,510,000 cattle, 718,000 buffalo, (1953) 2,000,000 goats, 300,000 camels. Wool production in 1955 was about 8,000 metric tons (clean basis).

Industry is still embryonic. Of some 100 firms, the most important are those making brick, tile, woolen textiles, vegetable oils, soap, glass and cigarettes.

Recent foreign-trade data are as follows (in millions of dinars):

	1952	1953	1954
Exports*	99.6	139.9	174.5
Imports	61.8	68.7	72.8

\* Adjusted to include estimated value of crude petroleum exports.

Chief exports in 1954 were petroleum (89%), barley (6%) and dates (2%). Leading suppliers were Britain (31%), continental European Payments Union countries (25%) and the U. S. and Canada (14%); leading customers, France (31%), other continental EPU countries (37%) and Britain (16%).

The only port for seagoing vessels is that of Basra, located on the Shatt al-Arab River near the head of the Persian Gulf. There are about 4,550 miles of roads suitable for vehicular traffic. Iraq State Railways, the only rail line of the country, operates three lines totaling 1,055 miles of main line.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Iraq has arid desertland west of

the Euphrates, a broad central valley between the Euphrates and Tigris, and mountains in the northeast. The fertile lower valley is formed by the delta of the two rivers, which join about 120 miles from the head of the Persian Gulf. The gulf coast line is 26 miles.

Oil production is concentrated at the Baba Gurgur fields near Kirkuk, which are operated on behalf of an international group by the British-managed Iraq Petroleum Company (production 1955: 24,202,271 long tons). Associated companies operate fields at Zubair and Rumaila near Basra (1955: 7,231,528 tons) and at Ain Zalah (1955: 1,282,428 tons). The Khanaqin Oil Company, a British Petroleum subsidiary, operates another field which produces only for local consumption (1955: about 360,000 long tons).

Oil is piped to Tripoli in Lebanon, Baniyas in Syria, Fao on the Persian Gulf and Haifa in Israel (suspended in 1948). The Iraqi government received \$206,500,000 in oil revenues in 1955.

Iraq's climate, generally, runs to great extremes—long hot summers and short cold winters. The area on the Persian Gulf is one of the hottest places in the world. Average temperature at Baghdad is 49° in January and 92° in July and August. The rainfall there is only about 7 inches annually.

## Ireland (Republic)

Area: 26,601 square miles (not including larger water bodies).\*

Population (census 1956)†: 2,894,822 (almost entirely Irish).

Density per square mile: 108.8.

President: Séan T. O'Kelly.

Prime Minister: John A. Costello.

Principal cities (census 1951): Dublin (Baile Atha Cliath), 522,183 (capital); Cork, 74,567 (seaport); Limerick (Luimneach), 50,820 (seaport); Dun Laoghaire (Kingstown), 47,920 (seaport).

Monetary unit: Irish pound.

Languages: Gaelic, English.

Religions (census 1946): Roman Catholic, 94.3%; Protestant Episcopal, 4.2%; Presbyterian, .8%; others, .7%.

\* Total area: 27,136 square miles. † Preliminary figures.

**HISTORY.** About the beginning of the Christian Era, Ireland was divided into five kingdoms, each with its own ruler, but each subject to the overlord of all Ireland who dwelt at Tara. St. Patrick introduced Christianity in A.D. 432.

Norse depredations along the coasts, starting in 795, ended in 1014 with Norse defeat at the Battle of Clontarf by forces under Brian. In the middle of the 12th century, the Pope gave all Ireland to the English Crown as a papal fief. In 1171 Henry II of England was acknowledged "Lord of Ireland," but native sectional rule

continued for centuries, and English control over the whole island was not reasonably absolute until the 17th century. By the Act of Union (1800), England and Ireland became the "United Kingdom of Great Britain and Ireland."

The great potato famine of 1846-48 took many lives and drove millions to emigrate to America.

Several home-rule bills were introduced in the English Parliament in the 19th century, but failed of passage. One was finally approved in 1914, but enforcement was suspended by the outbreak of World War I. During the war, agitation for freedom was carried on by the nationalist party, which was called Sinn Féin (Ourself). In 1916 the British quickly suppressed the famous Easter Rebellion and executed its leaders.

After the 1918 elections, seventy-three of the Sinn Féiners elected to the English Parliament met in Dublin, proclaimed themselves an Irish Parliament, and passed a declaration of independence. The result was war between Irish nationalists and British troops from January 1919 to May 1921. A treaty ratified in December 1921 gave Ireland political status equal to that of Canada. Six Ulster counties, largely Protestant, formed a separate government as Northern Ireland, closely bound to England; the other twenty-six became the Irish Free State. Republican extremists, headed by Éamon de Valera, refused for several years to recognize the treaty.

William Cosgrave, leader of the Sinn Féin's right wing, was President from 1922 to 1932. In the latter year, De Valera's party, Fianna Fáil, won control of the government. Under De Valera's leadership a new Constitution was adopted in 1937, making the nation, Ireland, in effect, a republic.

Dr. Douglas Hyde, elected without opposition as the first President in 1938, was succeeded in 1945 by Séan T. O'Kelly, the Fianna Fáil nominee (re-elected in 1952). The country maintained strict neutrality during World War II.

De Valera's long tenure as Prime Minister came to an end in Feb. 1948, when the Fianna Fáil lost its absolute majority in the parliamentary elections. John A. Costello, a Fine Gael moderate, took office at the head of a six-party coalition Cabinet on Feb. 18, 1948. He yielded to De Valera on June 18, 1951, after new elections but again took office on June 2, 1954.

The nation severed its last ties with the British Crown at midnight April 17, 1949, and officially proclaimed itself the Republic of Ireland on the next day—Easter Monday.

**GOVERNMENT AND DEFENSE.** Ireland is a sovereign, independent republic. The

President, directly elected for seven years, names the Prime Minister on the nomination of the Chamber of Deputies. Parliament (Oireachtas) has two houses. The Chamber of Deputies (Dáil Éireann) has 77 members elected by proportional representation for a five-year term. The Senate (Seanad Éireann) has 60 members, of whom 11 are named by the Prime Minister, 6 by the universities, and 43 from vocational panels. Its powers, however, are limited.

Party representation in the Dáil Éireann after elections of May 18, 1954, was as follows: Fianna Fáil, 65; Fine Gael, 50; Labour, 19; Farmers, 5; Clann Na Póilítí, 3; independents, 5.

Military service is voluntary. The army has a permanent authorized strength of 5,500. In 1938 Britain gave up its last defense posts in the republic, including those located at Cobh, Berehaven and Lough Swilly.

**SOCIAL AND ECONOMIC CONDITIONS.** Elementary education is free and is provided in state schools; secondary education is under private control, notably the religious orders. Technical and agricultural education is under local control, aided by state subsidies. Illiteracy is negligible. The 380 elementary schools had 468,707 pupils in 1953; 447 secondary schools had 54,919 in 1953-54. The University of Dublin (Trinity College), founded in 1591, had an enrollment of 2,018 in 1953-54, and the National University of Ireland (constituent colleges at Cork, Galway, Dublin and Maynooth) had 6,084.

The majority of the people are English-speaking, although the government has attempted to promote the traditional Gaelic language, which is an essential part of the curriculum for all state schools.

Ireland is predominantly an agricultural country, with about 70 per cent of the total land area (17,000,000 acres) devoted to crops and pasture. The pastoral industry is the basis of the nation's economy, but recent years have brought a greater diversity in agriculture, marked by large increases in sugar beet and wheat production. Principal crops in 1955 were wheat, 99,000 long tons; rye, 3,000 tons; oats, 17,000 tons; potatoes, 2,114,000 tons; sugar beets, 597,000 tons. Other staple crops are flax, turnips, cabbage and hay. Live-stock in June 1955 included 4,483,474 cattle, 3,268,896 sheep and 798,845 hogs. Wool output in 1955 was 16,765,723 lb. (greasy); butter, 1,046,933 cwt.

Leading manufactures are ordinarily beverages, tobacco, wood, paper, clothing, textiles and metals. The hydroelectric plant erected on the Shannon River in County Limerick provides cheap electricity for homes and factories.

Trade statistics are as follows (in millions of Irish pounds):

	1953	1954	1955
Exports	114.1	115.1	110.3
Imports	182.7	179.9	204.3

The United Kingdom (including Northern Ireland) was the leading customer in 1955 (87%). The United Kingdom was also the chief supplier (53%), followed by the U. S. (9%) and western Germany (5%). Major exports were cattle (33%), beef and veal (6%), chocolate crumb (5%) and beer (5%). Major imports were machinery, textiles, oils and fats, vehicles, cereals and coal.

Railway mileage is about 2,400. The highway system totaled 48,800 miles in 1954. Shannon is an important international airport. There are 670 miles of canals and navigable waterways.

Recent finance data are as follows (in millions of Irish pounds):

	1954-55	1955-56	1956-57*
Revenue	106.7	111.7	121.8
Expenditure	108.4	112.0	121.8

\* Budget estimate.

The public debt on March 31, 1956, was £326,000,000; state assets amounted to £197,000,000.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Occupying the entire island except for the six northern counties of Ulster, Ireland resembles a basin—a central plain rimmed with mountains, except in the Dublin region. The mountains are low, with the highest peak, Carruntuohill located in Kerry County, rising to a height of 3,415 feet.

The principal river is the Shannon, which begins in the north central area, flows south and southwest for about 240 miles and empties into the Atlantic. About 20 per cent of the country is covered by bogs. Among the many lakes are the famous Lakes of Killarney in the southwest county of Kerry.

In 1955 Ireland mined 193,763 long tons of coal, some gypsum, and considerable peat from its bogs, but otherwise the mineral resources are negligible, as are those of the forests. The fishing industry employs about 10,000 men. The 1955 wet-fish catch, including mackerel, herring, whiting, cod and plaice, came to a total of 310,492 cwt. valued at £700,944 (preliminary).

A moist and mild climate, with annual rainfall running between thirty and forty inches fairly evenly distributed throughout the year, is influenced by the Gulf Stream, which makes the winters warmer than in other places in the same latitude. The mean temperature at Dublin is 41.7° in January and 60.5° in July.



## Israel (Republic)

Area: 7,984 square miles.  
 Population (est. Dec. 31, 1955): 1,789,-  
 075 (1953: Jewish, 88.9%; Moslem, 7.6%;  
 Christian, 2.5%; others, 1.0%).  
 Density per square mile: 224.1.  
 President: Itzhak Ben-Zvi.  
 Premier: David Ben-Gurion.  
 Principal cities (est. Dec. 31, 1955): Tel  
 Aviv-Jaffa, 363,500 (industrial center);  
 Haifa, 158,000 (chief port); Jerusalem  
 (Israeli), 146,000 (capital).  
 Monetary unit: Israeli pound (£I).

**HISTORY.** The history of Palestine, cradle of two of the great religions of the world, and homeland of the modern state of Israel, is mostly a chronicle of invasion, conquest and confusing divisions. To the ancient Hebrews it was known as the "Land of Canaan"; the name Palestine is derived from that part of the country inhabited by the Philistines of Biblical times. About 1000 B.C. the Hebrews succeeded in establishing a single monarchy, which later split up into two kingdoms—Judah and Israel. The country was subsequently invaded and overcome by many peoples, including the Assyrians, Babylonians, Egyptians, Persians, Macedonians, Romans and Byzantines. In A.D. 634-36, Palestine was wrested from the Byzantine Empire by the Arabs. Frankish Crusaders captured Jerusalem in 1099 and set up a feudal kingdom which endured until the defeat of the Franks by Saladin (1187) and the restoration of Moslem rule. In 1516 suzerainty over the area was transferred from the Mamelukes of Egypt to the Turks. It remained part of the Ottoman Empire until World War I, when British forces under General Allenby defeated the Turks and captured Jerusalem (Dec. 9, 1917). The League of Nations mandate awarded to Great Britain was put in force on Sept. 29, 1923.

Meanwhile, a movement had been founded in 1897 by Theodor Herzl to create a Jewish homeland in Palestine, and a considerable number of Jewish immigrants had entered the country prior to World War I. On Nov. 2, 1917, official British recognition was given both to the growing Arab nationalist movement and to the Zionist aspirations by the issuance of the so-called Balfour Declaration.

The declaration was attacked by the Arabs. Throughout the period between the two World Wars, outbreaks of violence and open revolt occurred. Jewish immigration continued, especially after the rise of Hitler. A British royal commission report approved by the British government July 7, 1937, recommended the partition of Palestine into an Arab and a Jewish state separated by a mandated area in the vicinity of Jerusalem and at Nazareth. The Arabs opposed the proposal, advocating instead the establishment of an independent

Palestine with full minority rights for the Jews. In May 1939, the British government issued a White Paper declaring the establishment of a Jewish state contrary to British obligations to the Arabs and promising, after a transitory period of ten years, the establishment of an independent Palestine in which Arabs and Jews would share authority in government. During the next five years, 75,000 Jews were to be allowed to enter Palestine. These proposals did not satisfy either party, and the League Mandates Commission questioned their validity, but the outbreak of World War II overshadowed all other issues.

Arab-Jewish co-operation in the war effort introduced a period of order, but the end of European hostilities in 1945 brought a renewal of friction, and the formation of the Arab League in that year served to demarcate lines of opposition. Attempts to bring Jewish immigrants into Palestine illegally were intensified thereafter, and terrorism grew apace.

Termination of the British mandate March 14, 1948, and withdrawal of British forces brought new violence. An independent state of Israel was immediately proclaimed by the Jewish National Council, and Arab forces converged on Palestine from the south, north and east, spearheaded by the crack British-trained Arab Legion of King Abdullah of Jordan. Within a few hours Arab-Jewish hostilities were in full swing. On June 11, however, there went into effect a four-week truce supervised by Count Folke Bernadotte, Swedish U. N. mediator in Palestine. Fighting resumed on July 9 with Israeli forces gaining on all fronts except in Jerusalem, part of which had been taken by Jordanian troops prior to the truce. On July 17 a second truce was effected on order of the U. N. Security Council. Bernadotte was assassinated on Sept. 17 by unidentified Jewish terrorists and his duties were taken over by Dr. Ralph Bunche of the United States.

Fighting broke out during the truce chiefly at Jerusalem but also in western Galilee and the Negeb. A final cease-fire took effect on Jan. 7, 1949, and an armistice agreement was concluded with Egypt on Feb. 24 and with Jordan on April 3. During the hostilities Israel lost none of the territory allotted to it under the partition plan and increased that territory by about 50% by gaining western Galilee, a broad corridor to Jerusalem through central Palestine and part of modern Jerusalem. In April 1950, Jordan incorporated eastern and central Palestine, including the Old City of Jerusalem.

Israel's governmental structure took shape rapidly. Elections were held in Jan. 1949 for a constituent assembly, which adopted a Constitution on Feb. 14; the pro-

ional leaders, Chaim Weizmann and David Ben-Gurion were confirmed as President and Premier, respectively. Recognized most non-Arab countries, the new nation was admitted to the U. N. on May 11, 1949, but Israeli-Arab relations remained hostile, with frequent border incidents. Despite many Cabinet crises, Ben-Gurion's government met with increasing success the problems arising out of an unfavorable trade balance, large numbers of immigrants and the urgent need for foreign capital investment and additional industries.

Dr. Weizmann died Nov. 9, 1952, and David Ben-Zvi was elected to succeed him as President on Dec. 8. Ben-Gurion resigned for reasons of health on Dec. 7, 1953, but took over again on Nov. 3, 1955, from Moshe Sharett, who had succeeded him.

**GOVERNMENT.** The Israeli Constitution adopted by the Constituent Assembly in 1949, provides a republican form of government headed by a President elected for a 5-year term by the Chamber of Deputies. Legislative power is vested in the Chamber of Deputies, the members of which are elected by the vote of all citizens who have reached the age of 21. The government is administered by the Cabinet, which is headed by the Premier and is responsible to the Chamber of Deputies. Elections held July 26, 1955, divided the seats in the Chamber of Deputies (Knesset) as follows: Mapai (Labor), 40; Meretz, 15; General Zionist (rightist), 13; National Religion Front, 11; Achdut Avoda (Marxist), 10; Mapam, 9; Communists, 6; others, 16.

The Constitution characterizes Israel as the national home of the Jewish people and directs the admission of every Jew who desires to settle within its borders. Subject to control of the Chamber of Deputies. Between May 1948 and Dec. 31, 1955, 775,000 Jewish immigrants entered Israel; the peak year was 1949 (239,141). Military service is compulsory. The army had 50,000 men on active duty in 1956 with 10,000 in ready reserve. The navy on Dec. 31, 1955, had 2 destroyers, 5 frigates and 12 escort vessels and several other smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is under the supervision of the Ministry of Education. Kindergarten and elementary education is free; most secondary schools are semiprivate. In 1953-54 there were 906 elementary schools with 9,129 pupils, 75 secondary schools with 16,640 pupils and 115 Arab schools with 14,410 pupils. The Hebrew university in Jerusalem had 3,108 students in 1954.

Agriculture is the chief economic activity. The maritime plain, the plain of Esdraelon and the northern Jordan valley are the principal agricultural areas. Citrus

growing, confined largely to the maritime plain, normally furnishes the major export crop. Production (1954-55) was 392,000 metric tons. Others include olives, rice, fruits and vegetables, figs, tobacco, wheat, barley, corn, sesame and potatoes. There are many collective rural settlements.

Industry is developing rapidly, especially the food-processing, textile, metalworking and chemical groups. Diamond cutting, although dependent on rough diamond imports, is of major importance; and there are oil refineries and storage tanks at Haifa, a terminus of the pipeline from the Iraqi oil fields (suspended since 1948).

Recent foreign-trade statistics are as follows (in millions of Israeli pounds):

	1953*	1954*	1955*
Exports	21.3	31.5	31.7
Imports	100.4	103.5	117.2

\* Calculated at the rate of £1 = U.S. \$2.80.

Chief exports in 1955 were citrus fruits (36%) and polished diamonds (23%). Leading customers were the U. S. (19%), Britain (19%) and Turkey (12%); leading suppliers, the U. S. (28%), western Germany (18%) and Britain (10%). Leading imports were grain and flour (11%), machinery (10%) and iron and steel and manufactures (8%).

Internal communication is provided by 332 miles of railway (in operation, 1956) and a good highway network totaling 1,633 miles (1955). The excellent airport at Lydda, near Tel Aviv, is served by major international lines and El Al, Israel's international line, which flew 2,681,365 miles and carried 34,462 passengers in 1955. The merchant marine had 38 vessels (100 tons and over) aggregating 122,235 gross tons on June 30, 1955.

Israel has been heavily dependent on international loans. Recent public finance data are as follows (in millions of Israeli pounds):

	1954-55	1955-56*	1956-57*
Revenue†	661.4	747.9	769.3
Expenditure	628.4	747.9	769.3

\* Budget estimate. † Includes proceeds of loans and counterpart funds.

On Dec. 31, 1955, the foreign debt was the equivalent of U. S. \$356,510,000; the internal debt totaled £332,696,000.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Northern Israel is largely a plateau traversed from north to south by mountains and broken by great depressions, also running from north to south.

The maritime plain of Israel is remarkably fertile, but the southern Negeb region, which comprises almost half the total area, is largely a wide desert steppe area. The Jordan, the only important river, rises in Syria and flows along the Jordan border through the Hule marshes and lake and the Sea of Tiberias (Galilee)

into Jordani Palestine and thence into the Dead Sea, 1,290 feet below sea level.

Mineral resources are limited. They include gypsum, sulfur, limestone, and rock salt, together with potash and bromine from the Dead Sea.

Summers are hot and dry, with occasional maximum temperature of 100°. The mean annual temperature at Jerusalem is 62.8°. Rainfall occurs chiefly in the autumn and spring; the mean annual average is 28 inches along the coast and 26 inches in Jerusalem.

## Italy (Republic)

### (Repubblica Italiana)

Area: 116,316 square miles.

Population (est. Jan. 1, 1956): 48,107,000 (predominantly Italian).

Density per square mile: 413.6.

President: Giovanni Gronchi.

Premier: Antonio Segni.

Principal cities (census 1951): Rome, 1,606,739 (capital); Milan, 1,264,402 (leading financial, industrial center); Naples, 1,003,815 (seaport); Turin, 711,492 (auto works); Genoa, 678,200 (seaport); Palermo, 482,594 (Sicilian seaport).

Monetary unit: Lira.

Religions: Roman Catholic, 99.6%; others (Protestant, Orthodox, Jewish), .4%.

**HISTORY.** Modern Italy did not exist as a unified country until 1870. Until A.D. 476, when the German Odoacer became head of the Roman Empire in the west, the history of Italy was largely the history of Rome. From A.D. 800 on, the Holy Roman Emperors, the Popes, Normans, Lombards and Saracens all vied for control over various segments of the Italian peninsula. Numerous city states, such as Venice and Genoa, and many small principalities flourished in the late Middle Ages.

In 1713, after the War of the Spanish Succession, Milan, Naples and Sardinia were handed over to Austria, but the Hapsburg influence on the peninsula was interrupted for a short time after 1800 when Italy was unified by Napoleon, who crowned himself King of Italy on May 26, 1805. After the Congress of Vienna in 1815, Austria continued to be the dominant power in Italy.

The movement for national unity began in the middle 19th century, staged by the "Young Italy" group headed by Giuseppe Mazzini. In 1858 Count Cavour, Prime Minister under King Victor Emmanuel II of Sardinia, secured the aid of Napoleon III of France in unifying Italy. After French and Sardinian forces had defeated the Austrians in 1859, Lombardy was annexed to Sardinia, and by the time the first Italian Parliament opened at Turin in Feb. 1861, all Italy was represented except Venetia, held by Austria, and Rome, which was the territory of the Pope. On

February 18, 1861, Victor Emmanuel II was proclaimed King of united Italy.

In 1866 Italy sided with Prussia against Austria and received Venetia; Rome was seized in 1870. In 1882 the young nation entered into the Triple Alliance with Austria and Germany. After war with Turkey in 1911-12, the Italians were awarded Tripoli in North Africa and the Dodecanese islands in the Aegean Sea.

Italy denounced the Triple Alliance of May 3, 1915, and declared war on Austria on May 24. By the treaty of St. Germain on Sept. 10, 1919, the south Tirol (Upper Adige) and the Istrian peninsula were awarded to Italy.

In the years immediately following World War I, Italy was a virtual battleground between the Socialists and Benito Mussolini's new Fascist movement. The weak government was powerless to maintain order as the two sides fought for power. Finally, on Oct. 30, 1922, the Fascists staged their "March on Rome" and took over the government. Mussolini was named Premier by King Victor Emmanuel III. Il Duce and his Fascist Grand Council soon made Italy into a corporate state with himself as dictator.

In 1935-36 Italy successfully invaded, conquered and annexed Ethiopia, despite the complaints of the League of Nations and economic sanctions.

On November 6, 1937, Italy joined the German-Japanese anti-Comintern pact and on December 11 withdrew from the League of Nations. The Rome-Berlin Axis was converted into a full military alliance on March 22, 1939. Meanwhile, Italian troops had seized Albania in April, 1939.

On June 10, 1940, Mussolini suddenly announced Italy's declaration of war against France (already in the throes of defeat) and Britain. Italian troops were able to advance only a few miles in France before the armistice was concluded on June 24, under which Italy annexed a small strip of France. On October 28, 1940 Italian forces invaded Greece from Albania, but were driven back by the Greeks who held a third of Albania by the time the Germans launched their Balkan campaign on April 6, 1941. Italy subsequently occupied parts of Yugoslavia and Greece. Following the German capitulation in North Africa and the fall of Sicily, Mussolini was ousted on July 25, 1943, and Marshal Pietro Badoglio formed a new government. On September 3, 1943, the day of the invasion of the Italian mainland by Allied forces, a military armistice was signed between General Eisenhower and Badoglio.

On June 9, 1944, five days after the Allies entered Rome, Badoglio was succeeded as Premier by Ivanoe Bonomi, a Socialist who formed a coalition Cabinet. The gov-



ernment was recognized by the Allies as the *de facto* government of Italy on October 25, but only as a cobelligerent, not as an ally.

Upon the collapse of German resistance in the north, Mussolini was tracked down and put to death by partisan forces on April 28, 1945. On December 10, Alcide De Gasperi, a Christian Democrat, took over from Ferruccio Parri, who had succeeded him as Premier in June.

On June 2, 1946, the Italian people voted in favor of a republic, and King Humbert II, who had succeeded his father on May 9, went into exile.

The new Constitution drafted by the constituent assembly took effect on Jan. 1, 1948. Following the Communist defeat in the election of April 1948, De Gasperi formed another coalition Cabinet from which the Communist and left-wing Socialist bloc was again excluded. Luigi Einaudi, veteran Liberal leader, was elected first President of the Republic on May 11. In April 1949, Italy adhered to the North Atlantic pact.

De Gasperi's centrist coalition lost ground to both leftist and rightist groups in parliamentary elections held June 7-8, 1953. He gave way on Aug. 17 to Giuseppe Pella, who formed an all Christian Democrat Cabinet. Pella was succeeded on Feb. 10, 1954, by Mario Scelba at the head of a coalition cabinet. Another coalition Cabinet headed by Christian Democrat Antonio Segni was sworn in July 6, 1955. Meanwhile, on April 9, Giovanni Gronchi, a liberal Christian Democrat, had been elected to succeed Luigi Einaudi as President.

**GOVERNMENT.** Under the 1947 Constitution Italy is a "democratic republic founded on labor." The President is elected for seven years by Parliament in joint session with regional delegates. The Cabinet, headed by the Premier and nominated by the President, must enjoy the confidence of Parliament, which is composed of the Chamber of Deputies, popularly elected for five-year term, and the Senate. All citizens are duty-bound to vote.

The Chamber of Deputies elected on June 7-8, 1953, had 590 members, of whom 161 were Christian Democrat, 143 Communist, 75 leftwing Socialist, 40 monarchist, 9 Social Movement (neo-Fascist) and 42 members of other parties. The Senate has 42 members.

**PEACE TREATY OF 1947.** The peace treaty which took effect Sept. 15, 1947, required Italian renunciation of all claims in Ethiopia and Greece, the cession of the Dodecanese to Greece, and of five small Alpine areas to France. In addition, the major part of the Istrian peninsula, including Trieste and Pola, went to Yugoslavia. The Free Territory of Trieste was carved out

of the area to the west of the new Yugoslav frontier.

Italy was to pay reparations of \$100,000,000 in kind over a seven-year period to the Soviet Union, \$125,000,000 to Yugoslavia, \$105,000,000 to Greece, \$25,000,000 to Ethiopia and \$5,000,000 to Albania; also to make two-thirds restitution for wartime damage to Allied property in Italy.

Zone A of Trieste (90 sq. mi.), including the city of Trieste, was transferred to Italy in Oct. 1954 and the remainder to Yugoslavia.

**DEFENSE.** Most of the defensive restrictions which were imposed by the 1947 treaty were lifted in Dec. 1951 over the objections of the U.S.S.R.

The navy in Dec. 1955 had 2 battleships, 3 cruisers, 7 destroyers, 38 frigates and escort vessels, 5 submarines and many other smaller craft.

#### **SOCIAL AND ECONOMIC CONDITIONS.**

**Education.** Elementary education is free and compulsory from 6 to 14. Elementary schools numbered 40,467 in 1953, with 4,530,659 pupils; the 2,799 secondary schools had 505,851 students. In 1954, 52 institutions of higher learning, including 28 universities, had 211,128 students. Illiteracy is about 11%.

**Religion.** Although the country is predominantly Roman Catholic, religious freedom is permitted. Catholic religious teaching is given in all elementary and intermediate schools. Relations with the Church are regulated by the treaty with the Holy See of Feb. 11, 1929, which established the temporal power of the Pope over Vatican City.

**Agriculture.** Agriculture, the most important branch of Italy's economy, engages more than a third of the population. It is extremely diversified; differences of altitude, soil and climate allow the production of all European crops from rye to rice, from apples to oranges, and from hemp to cotton. Approximately 41,050,000 acres are cultivated. Italy ranks next to France in wine production (average 1950-54: 1,182,000,000 U. S. gal.; 1955: 1,399,200,000 gal.) and next to Spain in olive oil production.

Crop data (in millions of metric tons):

	1953	1954	1955*
Wheat	9,056	7,251	9,505
Rye	130	115	125
Barley	313	278	292
Oats	602	546	528
Maize	3,213	2,954	3,194
Beet sugar	779	884	1,150
Olive oil	346	284	190

\* Provisional.

Livestock and dairy farming are important in Italy. Of the 50-odd varieties of Italian cheese, the best known are the

hard parmesan and pecorino (the latter made from ewe's milk) and the soft bel paese and gorgonzola. Cheese production in 1954 totaled 312,000 metric tons. In 1954 Italy had 9,033,000 cattle, 9,746,000 sheep and 3,746,000 hogs. Wool production (1955) totaled about 8,000 metric tons (clean basis).

**Industry.** Industrial production is centered in the north. The nature of the fascist corporate state had a tendency to foster industrial concentration prior to World War II. The textile industry is the largest and most important and supplies the home market as well as furnishing a large proportion of Italy's exports. The metal industries are handicapped by lack of coal, which must be imported in large quantities, and by insufficient iron ore reserves. The chemical, clothing and food industries are also important. Italy is a member of the European Coal and Steel Community.

Production in 1955 included cotton yarn, 147,911 metric tons; woven cotton fabrics, 101,114 tons; rayon yarn, 64,232 tons; pig iron and ferroalloys, 2,734,000 tons; raw steel, 5,258,390 tons; cement, 10,587,490 tons; automobiles, 230,827; trucks, 38,554.

**Trade.** Statistics of Italy's foreign trade, in billions of lire, are as follows:

	1953	1954	1955
Exports	942	1,024	1,161
Imports	1,513	1,524	1,691

Italy's leading customers by value in 1955 were western Germany (13%), the U. S. (9%), Switzerland (7%) and Britain (7%). Principal suppliers were the U. S. (15%), western Germany (13%), France (7%) and Iraq (6%). Leading exports were machinery and vehicles, fruits and vegetables, synthetic fibers and manufactures and cotton and manufactures. Leading imports included cotton, coal and coke, wool, grain and petroleum and products.

**Communications.** According to *Lloyd's Register*, the merchant marine had 1,149 ships (100 tons and over) aggregating 3,910,658 gross tons on June 30, 1955. On Oct. 1, 1955, 104 vessels of 452,162 gross tons were under construction in Italian yards. There are more than 150 seaports, of which the principal are Genoa, Venice, Naples, Leghorn and Trieste. Coastwise traffic is particularly important because of difficult land communications. State railways in 1954 totaled 10,500 miles. Highways in 1953 totaled 121,000 miles.

**Finance.** Data (in billions of lire):

	1953-54	1954-55*	1955-56†
Revenue	2,000.3	2,311.6	2,447.5
Expenditure	2,325.2	2,618.5	2,746.9

\* Provisional. † Budget estimate.

The total internal debt was 4,626,562,-000,000 lire on March 31, 1956.

**NATURAL FEATURES AND RESOURCES.**  
**CLIMATE.** Approximately 600 of boot-shaped Italy's 708 miles of length are in the long peninsula that projects into the Mediterranean from the fertile basin of the Po River. The Apennines, branching off from the Alps between Nice and Genoa, form the peninsula's backbone, and rise to a maximum height of 9,560 feet at the Gran Sasso d'Italia (Corno). The Alps are Italy's northern boundary.

Several islands form part of Italy. Sicily, 9,926 square miles, lies off the toe of the boot, across the Strait of Messina, with steep and rock-bound northern coast and gentler slopes to the sea in the west and south. Mt. Etna, an active volcano, rises to 10,741 feet, and most of Sicily is more than 500 feet in elevation. Sixty-two miles southwest of Sicily lies Pantelleria, 45 square miles, and south of that are Lampedusa and Linosa. Sardinia, 9,300 square miles, just south of Corsica, is about 125 miles west of the nearest Italian mainland, is largely mountainous, stony and unproductive.

Italy has many northern lakes, lying below the snow-covered peaks of the Alps. The largest are Garda (143 sq. mi.), Maggiore (83 sq. mi.) and Como (55 sq. mi.). The Po, the principal river, rises in the Alps on Italy's western border and crosses the Lombard plain to the Adriatic.

**Natural Resources.** Italy is ordinarily the world's largest producer of mercury. It is also an important producer of sulfur. The nation lacks, however, the staple minerals of coal, oil and iron, and is forced to import them. Building stone, particularly marble, is plentiful. Recent production data are as follows (in thousands of metric tons):

	1953	1954	1955
Bauxite	271	295	324
Coal	1,131	1,074	1,138
Lignite	758	638	411
Iron ore	1,030	1,093	1,381
Lead*	44	45	41
Mercury*	1,771	1,878	1,841
Petroleum†	660	534	1,571
Sulfur	240	227	201

\* Metal content. † Thousands of barrels.

In the south Tirol and in the central Apennines, abundant hydroelectric power resources and deposits of natural gas are being increasingly exploited. In 1955 Italy generated 37,259,000,000 kwh. of electricity, mostly by hydroelectric plants. Natural gas production totaled 3,622,403,000 cu. m.

**Forests.** Less than 20 per cent of Italy's area is forested. Principal products are soft and hard timber, charcoal and cork. The fishing industry does not fill domestic needs. Coral and sponges are marketed.

Climate. Italy's climate is variable. The Italian Riviera along the Gulf of Genoa is subtropical and highly favored by tourists. The winters in the high Apennines are cold and bitter. The western slope of peninsular Italy is warmer than the eastern side, and the Po basin in the north has cold winters and very hot summers. Sicily has a warm and equable climate. In Rome, December through February are the coldest months (average 47°), July and August are the warmest (75°), with abundant sunshine. Rainfall is heaviest in the Alps and lightest in the lowlands (33 inches a year at Rome).

#### FORMER ITALIAN COLONIAL EMPIRE

Under the 1947 treaty, Italy ceded the Italian colonies to Greece and renounced title to her African possessions, which consisted of Libya, Eritrea and Italian Somaliland. Somaliland (now known as Somalia) remained under Italian administration as a U. N. trust territory.

**SOMALIA**—Status: U. N. trust territory under Italian administration.

Area: 198,275 square miles.

Population (est. 1954): 1,268,000.

Administrator: Enrico Martino.

Capital: Mogadiscio (population: 74,000).

Foreign trade (1955): exports, 73,779,389 lire\* (78% to Italy); imports, 100,843,188 lire (57% from Italy). Chief exports: bananas (67%), hides and skins (11%), cotton (2%).

Agricultural products: dressed skins, cattle, sugar, cotton, cottonseed oil, fruits, bananas (exports 1955: 48,278 metric tons).

Forest products: gum, resin, kapok.

Mineral: tin.

\* One somalo = 14 cents U.S.

Somalia, a territory extending along Africa's east coast from the Gulf of Aden south to Kenya, fell within the Italian sphere of influence by treaties with the Somali Sultans in 1889 and by agreements with Britain in 1905 and 1924, with the Sultan of Zanzibar in 1905, and with Ethiopia in 1907. After the conquest of Ethiopia in 1936, the area was incorporated into Italian East Africa. It was occupied in Feb. 1941 by British troops.

Administration was turned over to Italy in Apr. 1, 1950, pursuant to a decision of the U. N. General Assembly on Nov. 21, 1949, under which the area is a U. N. trust territory. Administration is in the hands of Italy for a period of 10 years during which it is to be prepared for independence.

The overwhelming majority of the population are Somalis who belong to the Sunni sect of Islam; they are a pastoral, nomadic people whose livelihood depends on cattle, sheep and camels. However, the Italians (numbering 5,156 in 1953) established plantations in the south, especially in the fertile Juba region. The territory is far from self-supporting, requiring heavy Italian subsidy. The climate is torrid.

## Japan (Empire)

(Nippon)

Area: 142,801 square miles.

Population (census Oct. 1955)\*: 89,269,278.

Density per square mile: 625.1.

Ruler: Emperor Hirohito.

Premier: Ichiro Hatoyama.

Principal cities (census 1955)\*: Tokyo, 6,966,499 (capital; financial, manufacturing center); Osaka, 2,547,321 (chief industrial center); Nagoya, 1,336,779 (machinery, textiles); Kyoto, 1,204,017 (manufacturing); Yokohama, 1,143,287 (seaport); (census 1950) Kobe, 765,435 (seaport, shipbuilding); Fukuoka, 392,649 (seaport, textiles); Sendai, 341,685 (manufacturing, educational center).

Monetary unit: Yen.

Language: Japanese.

Religions (1938): Buddhism, 60%; Shintoism, 21%; Protestant (215,166); Roman Catholic (118,856).

\* Preliminary figures.

**HISTORY.** Japan's early history is inseparable from mythology. A series of legends attributes the creation of Japan to the sun goddess, from whom the later emperors were allegedly descended. The first of them was Jimmu Tennō, supposed to have ascended the throne on Feb. 11, 660 B.C.

Recorded Japanese history begins with the first contact with China in the 5th century A.D. Japan was then divided into strong feudal states, all nominally under the Emperor, but with real power often held by a court minister or clan. In 1185 Yoritomo, chief of the Minamoto clan, was designated Shogun (Generalissimo) with the actual administration of the islands under his control. Clans came and went, but a dual government system—Shogun and Emperor—persisted till 1867.

First contact with the West came about 1542, when a Portuguese ship off course arrived in Japanese waters. Portuguese traders, Jesuit missionaries, and Spanish, Dutch and English traders followed. Suspicious of Christianity and Portuguese support of a local Japanese revolt, the shoguns restricted all foreigners in 1636-38 except the Dutch, who were confined to Nagasaki. Western attempts to renew trading relations failed until 1853, when Commodore Matthew Perry sailed an American fleet into Tokyo Bay with a letter from President Fillmore.

Japan now quickly made the transition from a medieval to a modern power. Feudalism was abolished and industrialization was speeded. An imperial army was established with conscription. The shogun system was abolished in 1867 by Emperor Meiji, and parliamentary government was established in 1889. After a brief war with China in 1894-95, Japan acquired Formosa (Taiwan), the Pescadores Islands, and part of southern Manchuria. China also recog-



nized the independence of Korea (Chosen), which Japan later annexed (1910).

In 1904-05 the new Japan won prestige by defeating Russia in the Russo-Japanese War, gaining the territory of southern Sakhalin (Karafuto) and Russia's port and rail rights in Manchuria. In World War I, Japan, which took a negligible part in military operations, seized Germany's Pacific islands and leased areas in China. The Treaty of Versailles then awarded her a mandate over the islands.

At the Washington Conference of 1921-22, Japan agreed to respect Chinese national integrity. The series of Japanese aggressions which was to lead to the nation's downfall began in 1931 with the invasion of Manchuria. The following year, Japan set up this area as a puppet state, "Manchukuo," under Emperor Henry Pu-Yi, last of China's Manchu dynasty. On Nov. 25, 1936, Japan joined the Axis by signing the anti-Comintern pact. The invasion of China came the next year, and the Pearl Harbor attack was unleashed on Dec. 7, 1941.

For many months after Pearl Harbor, the Japanese army and navy enjoyed spectacular success, but by the end of 1942 the tide had begun to turn. Three years later the dropping of the world's first atomic bomb in combat on Hiroshima, followed by a second one on Nagasaki, knocked Japan swiftly into a surrender that already had become inevitable.

The formal surrender took place Sept. 2, 1945, aboard the battleship *Missouri* in Tokyo Bay. Southern Sakhalin and the Kurile Islands reverted to Russia, and Formosa (Taiwan) and Manchuria to China. The Pacific islands remained under U. S. occupation.

General of the Army Douglas MacArthur was appointed Supreme Commander for the Allied Powers (SCAP) Aug. 14, 1945. An 11-power (later 13-power) Far Eastern Commission was created to lay down occupation policies, while the 4-power Allied council advised and consulted with SCAP in carrying them out.

Soon after the surrender, Japan began the process of democratizing its political, social and economic structure under Allied eyes. Following the Socialists' victory in elections of April 20, 1947, Japan's first Socialist Premier, Tetsu Katayama, a lifelong Christian, formed a Cabinet composed of Socialists, Democrats and members of the People's Cooperative party on May 31, 1947. Dissension between the left and right wings of his party forced Katayama's resignation on Feb. 10, 1948. He was succeeded by Hitoshi Ashida, a Democrat leader, on Feb. 21. Ashida yielded to Shigeru Yoshida on Oct. 14, 1948.

Pres. Truman removed Gen. MacArthur

from his post as Supreme Commander for the Allied Powers on April 11, 1951, and named Gen. Matthew B. Ridgway in his place.

On Sept. 8, 1951, a treaty of peace with Japan was signed at San Francisco by the U. S. and 47 other nations. The U.S.S.R., Czechoslovakia and Poland were present at the conference but did not sign the treaty, which became effective April 28, 1952.

The treaty did not place any restrictions on Japan's political institutions, economy or armed forces. Japan was limited in territory to its 4 home islands, although the treaty did not recognize Soviet seizure of the Kurile Islands and South Sakhalin.

Conservative forces won an overwhelming victory in parliamentary elections held Oct. 1, 1952, and Yoshida was re-elected Premier. Ichiro Hatoyama, leader of the newly formed Democratic party, succeeded him on Dec. 9, 1954. The Democrats won the most seats in elections held Feb. 21, 1955 and Hatoyama was re-elected Premier on March 18, 1955.

**GOVERNMENT AND DEFENSE.** The Constitution, effective May 3, 1947, made drastic changes in Japan's political system. The Emperor retains only ceremonial functions, and executive power is vested in the Cabinet, headed by the Premier and collectively responsible to the Diet. Law-making power is vested solely in the Diet, composed of two houses—the House of Representatives, popularly elected for four-year terms, and the House of Councillors with 250 members elected for six-year terms. A bill of rights guarantees certain basic liberties. Women are enfranchised for the first time. Sovereignty, formerly vested in the Emperor, now is vested in the people, and the House of Representatives can override the veto of the House of Councillors by a two-thirds vote.

The elections of Feb. 1955 distributed the 467 seats in the House of Representatives as follows (1953 standing in parentheses): Democratic, 185 (0); Liberal, 111 (199); left-wing Socialist, 89 (72); right-wing Socialist, 67 (66); Communist, 2 (1); others, 12 (129, including 76 Progressive and 35 dissident Liberals).

**Ruler.** Emperor Hirohito, born April 29, 1901, succeeded his father, Yoshihito, on Dec. 25, 1926. He was married on Jan. 2, 1924, to Princess Nagako, born in 1903. They were born two sons, Crown Prince Akihito (Dec. 23, 1933) and Prince Masahito (Nov. 28, 1935), and 5 daughters. Succession to the Japanese throne is in the male line only.

**Defense.** The peace treaty of 1951 placed no limitations on the right of Japan to reararm, but the Constitution prohibited the maintenance of armed forces. A national "police" reserve was created in 1950, and

islation enacted in June 1954 provided for the creation of Japanese military, naval and air "defense" forces, to be built up over a period of 8 years (strength in 1955 was 168,000), each service to have its own general staff. The maritime force consisted of 2 destroyers, 28 frigates and escort vessels and 1 submarine in Dec. 1955. The U. S. began to deliver jet fighters to the Japanese air force in 1954-55.

The bilateral defense pact between the U. S. and Japan which became effective April 28, 1952, provided for the indefinite disposition of U. S. armed forces in and out of Japan. The U. S. was to furnish about \$150,000,000 in defense equipment under a mutual defense assistance agreement signed March 8, 1954.

**SOCIAL AND ECONOMIC CONDITIONS.**  
**Education.** Article 26 of the 1947 Constitution provides that "all people shall have the right to receive an equal education corresponding to their ability," and that education shall be free and compulsory as provided by law. A 1947 law provided a simplified school structure with 6 years of elementary education (compulsory), 3 of lower secondary, 3 of upper secondary and 2 of university education. In 1954 Japan had 22,036 elementary schools with 11,750,000 pupils, 15,906 secondary schools with 209,320 pupils and 528 colleges and universities with 565,453 students.

**Agriculture.** Japan is traditionally a land of small farms and, except in Hokkaido, the northernmost island, there is almost no large-scale farming and animal husbandry. The average holding is less than three acres. Double cropping makes self-sufficiency possible, but on a low level of subsistence.

**Major crops (thousands of metric tons):**

	1953	1954	1955*
Rice (rough)	10,298	11,392	14,818
Barley	2,091	2,583	2,408
Wheat	1,374	1,516	1,468
Potatoes	2,415	2,743	2,869
Sweet potatoes	5,391	5,226	...

\* Preliminary.

Production of silk cocoons (1955) was 4,375 metric tons; tea (1954), 67,830 tons. In 1954 there were 2,896,000 cattle, 833,000 pigs and 733,000 sheep.

**Industry.** Prewar Japan was one of the world's leading industrial nations and the only country in the Far East with highly developed textile, steel, machinery, chemical and electrical industries. The textile industry was dominant, but after 1931 considerable expansion took place in the heavy industries—metal, machinery-building and chemical—which were adaptable for war purposes.

Postwar industrial rehabilitation proceeded slowly, retarded by labor troubles

and deterioration of equipment; by 1956, however, the index of industrial activity stood at 300% of the 1948 level. In 1953 there were 172,613 factories employing 5 or more persons, with total employment of 4,667,000. In 1955, 167 vessels of 413,405 gross tons were completed.

#### INDUSTRIAL PRODUCTION (thousands of metric tons)

	1953	1954	1955
Pig iron and ferroalloys	4,518	4,608	5,217
Steel ingots	7,662	7,750	9,408
Cement	8,768	10,675	10,557
Cotton yarn	914*	1,024*	923*
Cotton fabrics	2,811†	3,184†	3,018†

\* Millions of lbs. † Millions of sq. yds.

Directives issued in 1945 effected the dissolution of the huge interlocking monopolies (*Zaibatsu*) in business and finance. Voting rights in the 80 major holding companies and 3,500 subsidiaries were taken over by a government commission which also seized securities held by members of *Zaibatsu* families, for resale to the public.

**Trade.** Before World War II, Japan ranked fifth in world trade. Private trade was resumed in 1947; by the mid-1950s, Japan had regained its place in world trade. Recent data are as follows (in millions of U. S. dollars):

	1953	1954	1955*
Exports	1,274.8	1,629.3	2,010.6
Imports	2,409.6	2,399.4	2,471.4

\* Provisional.

Leading customers in 1955 were the U. S. (22%), Hong Kong (4%), India (4%) and Argentina (4%); leading suppliers, the U. S. (31%), Australia (7%), Malaya (4%) and Canada (4%). Leading exports were textiles (37%), iron and steel and manufactures (13%), machinery (12%) and chemicals (5%). Imports included raw cotton (15%), petroleum and products (9%), rice (8%), wheat (7%) and wool (7%).

**Communications.** Before World War II the merchant marine carried almost 80 per cent of the foreign trade and was surpassed only by those of the U. S. and Britain. Wartime losses were enormous, but recovery was fairly steady. By June 30, 1955, there were 1,770 vessels (100 tons and over) with a gross tonnage of 3,735,318, according to *Lloyd's Register*.

Railway mileage in 1954 was 17,247. The national and prefectural highway system totaled 85,139 miles in 1952.

**Finance.** World War II left Japan with a staggering public debt, mounting inflation and a disorganized financial system. Recent data on general account (in billions of yen) are as follows:

	1954-55*	1955-56†	1956-57†
Revenue	1,185.1	991.5	1,034.9
Expenditure	1,040.8	991.5	1,034.9

\* Provisional. † Budget estimate.

The national debt totaled 1,045,980,000,-000 yen on March 31, 1956.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Japan's four main islands are Honshu, Hokkaido, Kyushu and Shikoku. The Ryukyu chain to the southwest is U. S. occupied and the Kuriles to the northeast are Russian occupied. The surface of the main islands consists largely of mountains separated by narrow valleys. There are about 50 more or less active volcanoes, including famous Fujiyama near Tokyo (12,385 ft.).

**Minerals.** Japan is relatively poor in minerals, and large imports of coal, petroleum and iron ore are necessary. Production in 1955 included coal, 42,423,000 metric tons; petroleum, 2,235,000 barrels; iron ore concentrates (55% metal content), 965,000 tons. In that year 2,862,000 tons of coal and 5,459,000 tons of iron ore were imported. Other minerals include lead, silver, gold and copper.

**Forests.** Japan is well-wooded, with about 60,000,000 acres of forest. Among forest products are bamboo, charcoal and timber. Wood pulp production in 1955 totaled 1,604,386 metric tons; newsprint (1954), 439,000 tons; lumber (1954), 14,-089,000 cubic meters.

**Fisheries.** Fishing, one of Japan's biggest industries, provides a staple food and considerable exports in normal years. The catch in 1954 amounted to 4,543,500 metric tons.

**Climate.** The Japanese climate ranges from subtropical in its southern extremes, to winter cold and snow in Hokkaido. The winter temperatures are moderated in the central islands by the Japan Current. The mean annual temperature in Tokyo is 56° and the capital's annual rainfall amounts to 60 inches.

## Jordan (Hashemite Kingdom of)

Area: 37,264 square miles.\*  
Population (est. 1954): 1,403,000.\*  
Density per square mile: 37.7.\*  
Ruler: King Hussein I.  
Prime Minister: Said el-Mufti.  
Principal cities (est.): Amman, 170,000 (capital); Jerusalem (Jordanian), 75,000 (religious center).  
Monetary unit: Jordanian dinar.  
Language: Arabic.  
Religions: Moslem (Sunni), 92%; Christian, 8%.

\* Including Arab Palestine (area: 2,125 sq. mi.; population 1953, 745,786).

**HISTORY.** Jordan, once the Lordship of Oultre-Jourdain in the Latin Kingdom of

Jerusalem, attracted world-wide attention in 1948 when its King, Abdullah, led Arab forces in the invasion of Palestine from the east. An ancient land, about the size of Indiana, the small kingdom was known in the time of Moses as Edom and Moab. It passed to the Amorites of Damascus and in A.D. 106 became part of the Roman province of Arabia. In 633-36 it was conquered by the Arabs, and a period of decline and depopulation ensued. It fell to the Turks in the 16th century.

Conquered from the Turks by the British in World War I, Jordan was separated from the Palestine mandate in 1920, and placed in 1921 under the rule of Abdullah I, Hussein.

In 1923 Britain recognized Jordan's independence, subject to the mandate. During World War II, Jordan co-operated completely with Britain. On March 22, 1946, Britain abolished the mandate and recognized the full and complete independence of Jordan. That part of Palestine occupied by Jordanian troops was formally incorporated by action of the Jordanian Parliament on Apr. 24, 1950.

Abdullah was assassinated June 20, 1951. His son Talal was deposed as mentally ill Aug. 11, 1952. Talal's son Hussein, born May 2, 1935, succeeded him.

**GOVERNMENT AND DEFENSE.** Jordan is a constitutional monarchy. The King rules with the aid of a Cabinet of department heads responsible to Parliament, which consists of the popularly elected Chamber of Deputies of 40 members and the Senate of 20 appointed members. Arab Palestine is represented in both bodies.

Defense of the country is entrusted to the British-trained Arab Legion of about 20,000 men, the most effective force among all Arab armies. The Anglo-Jordanian treaty of March 20, 1948, replacing that of March 22, 1946, has mutual assistance provisions. Jordan ousted the Legion's British commander on March 2, 1956, and Britain recalled most of its remaining military officers. Jordan, however, continued to receive an annual defense subsidy from Britain.

**SOCIAL AND ECONOMIC CONDITIONS.** Life in Jordan is primitive; there are estimated to be 50,000 nomads and 120,000 seminomads. At least 95 per cent of the total area is desert. At least one-half the population is believed to be illiterate. In 1952 there were 783 elementary and 71 intermediate secondary schools with a total enrollment of 139,000.

Most of the country is suitable only for pasturing sheep, goats and camels. Cultivated land is limited to a relatively small area west of the Hejaz Railway. In the drier cultivated areas of the plateau, the inhabitants retain tribal organization and



live in tents. Foreign trade is limited to the exchange of wheat, fresh fruit, wool and live animals for sugar, tea, and other necessities. Exports in 1954 were 2,823,737 dinars; imports, 19,840,468 dinars. Leading suppliers in 1954 were Britain (15%), the U. S. (10%) and western Germany (5%). Most of the exports go to neighboring Arab countries.

Despite the sparse settlement of the country, Jordan has good roads to Israel, Syria and Iraq. It is crossed from north to south by the Hejaz Railway.

**TOPOGRAPHY AND CLIMATE.** Jordan is mainly a plateau with an average altitude of 3,000 feet, sloping gently eastward. The eastern edge is a steep slope overlooking the Rift Valley (Jordan River, Dead Sea and Wadi el Araba) 3,000-4,000 feet below. To the south are mountains over 5,000 feet high and a sandstone area cut by deep canyons. Jordanian Palestine is largely a hilly plateau. Jordan borders on the Red Sea for a few miles in the southwest. The subtropical steppe and desert have wet mild winters and dry hot summers. Rainfall near the escarpment decreases from about 26 inches in the north to 10 inches in the south. Average maximum temperature in August is 92°; average minimum in January is 39°.

## Korea (Chosen)

Area: 85,266 square miles.  
Population (est. 1955): 28,600,000 (almost entirely Korean).  
Density per square mile: 335.4.  
President, South Korea: Syngman Rhee.  
Premier, North Korea: Kim Il-sung.  
Principal cities (est. 1955): Seoul, 1,300,000 (capital, south Korea); Pusan, 840,000 (chief port); (est. 1952) Pyongyang, 500,000 (capital, north Korea); (est. 1949) Wonsu, 313,705 (silk center); Inchon, 265,000 (seaport).

Monetary unit: Hwan.  
Languages: Korean, Chinese, Japanese.  
Religions: Buddhist, Confucianist, Taoist, Christian (500,300 Christians in 1938).

**HISTORY.** Korea, a peninsula about 600 miles long extending out from Asia between the Yellow Sea and the Sea of Japan, was an international battleground from 1950-53, when Communist troops of North Korea invaded the U. N.-recognized republic of South Korea below the 38th parallel.

According to legend which may be partly historical, a Chinese sage named Kija founded the kingdom of Chosun ("Morning Calm") in 1122 B.C. and thus began a dynasty which lasted until 193 B.C. In 108 B.C. Korea was annexed to China, and later divided into three small principalities which formed the kingdom of Silla. Silla revolted in A.D. 918 and declared its independence. In 1592 the Koreans defeated a

Japanese fleet and, with Chinese help, ousted the Japanese invaders from their land. In 1627, the Manchus seized Korea and placed it again under Chinese sovereignty. In the Chinese-Japanese War of 1894-95, Japan won predominant influence in Korea, and in 1905 reduced it to a protectorate. In 1910 Japan formally annexed Korea. A Korean bid for independence was crushed ruthlessly in 1919.

In Aug. 1945, at the end of World War II, Korea was occupied by Soviet and U. S. troops. The United States, United Kingdom and Soviet Union agreed at Moscow in Dec. 1945 that Korea should be placed under the trusteeship of those three powers and China for a period not to exceed five years. The U. S. and the U.S.S.R. were unable to agree on the formation of an all-Korean provisional government, and in Nov. 1947 the U. N. General Assembly set up a commission, boycotted by the U.S.S.R., to arrange for elections. Elections were held in the U. S. zone on May 10, 1948, for a national assembly, which on July 12 adopted a republican Constitution and on July 20 elected Syngman Rhee President. The new republic was proclaimed on Aug. 15 and was recognized as the legal government of Korea by the U. N. General Assembly on Dec. 12, 1948. Meanwhile, a North Korean "People's Republic" had been formed in the Soviet zone north of the 38th parallel on May 1, 1948. It claimed jurisdiction over all of Korea.

On June 25, 1950, South Korea was attacked by North Korean Communist forces. U. S. armed intervention was ordered on June 27 by Pres. Truman and on the same day the U. N. invoked military sanctions against North Korea. Gen. Douglas MacArthur was named commander of U. N. forces on July 7. U. S. and South Korean troops fought a heroic holding action, but by the first week of August, they had been forced back to a 4,000 sq. mi. beachhead in southeast Korea. There they stood off superior North Korean forces until Sept. 15, when a major U. N. amphibious attack was launched far behind the Communist lines at Inchon, port of Seoul. By Sept. 30, U. N. forces were in complete control of South Korea; they then invaded North Korea and were nearing the Manchurian and Siberian borders when several hundred thousand Chinese Communist troops entered the conflict in late October. U. N. forces then retreated successfully below the 38th parallel, where in succeeding months they repulsed several major attacks. On May 24, 1951, they recrossed the parallel and had made important new inroads into North Korea when truce negotiations began on July 10 at Kaesong. The truce talks, later moved to Panmunjom, continued periodically in 1952 and 1953 amid sporadic hostilities. An armistice was finally signed at Panmunjom on July 27,

1953, leaving a devastated Korea in need of large-scale rehabilitation. The armistice contemplated an international political conference on the status of Korea, but negotiations for arranging it broke down. The question was discussed without result at the Geneva conference on Far Eastern problems (April 26-June 19, 1954).

The U. S. and South Korea signed a mutual defense treaty on Oct. 1, 1953, and in Aug. 1953 the U. S. Congress authorized the use of up to \$200,000,000 for the rehabilitation and economic support of South Korea.

**GOVERNMENT.** South Korea is a republic, with legislative powers vested in a Parliament and executive power in a popularly elected President and a Cabinet named by him.

North Korea is a typical Soviet state under the Constitution adopted on Sept. 2, 1948.

**SOCIAL AND ECONOMIC CONDITIONS.** In 1954, there were 2,342,065 pupils in elementary schools, 324,114 in middle schools and 160,266 in higher schools in South Korea. There is a university at Seoul.

The Korean population is more or less homogeneous and successfully withstood Japanese efforts to assimilate it. South Korea has 43 per cent of the peninsula's area and over two-thirds of its population.

Korea, predominantly agricultural, cultivates about 10,850,000 acres. Chief products are rice, barley, oats, rye, millet, soybeans, tobacco, cotton and wheat. The 1955 rice crop in South Korea was about 3,175,000 metric tons.

Industrial development was speeded in the last years of Japanese rule. The leading industries by value of output ordinarily are chemical, textile, food, beverage and tobacco. Korea north of the 38th parallel has by far the larger portion of the country's industry and abundant hydroelectric resources.

Korea's prewar foreign trade was closely linked with that of Japan. South Korea's postwar trade has been financed to a large extent by U. S. funds. Imports in 1954 totaled \$93,900,000 (excluding U. S.- and U. N.-financed imports of \$307,400,000); exports were \$24,300,000. Over 50% of the trade was with Japan. Chief imports were foodstuffs, mainly rice, and manufactured goods such as textiles and fertilizers; chief exports were raw materials. North Korea's trade is chiefly with Communist China and the U.S.S.R.

Land communications, well developed by the Japanese for strategic reasons, included about 2,400 miles of railway in operation in 1954, and 21,000 miles of highway.

South Korea is insolvent and dependent

on U. S. and other contributions. The hwan was introduced in Feb. 1953 to replace the inflated won.

**NATURAL FEATURES AND RESOURCES.** **CLIMATE.** Korea's coast, with a rugged mountain range along the east, is fringed with more than a thousand islands. Several rivers are navigable for more than a hundred miles, including the Rakuto in the south, the Kan in the central region and the Yalu in the northwest, on the Manchurian border.

Korea's best mining regions are in the north. Leading products are coal, gold, silver, copper, tungsten ore, iron ore, graphite, lead, alum stone and pyrite ore.

Despite Japanese exploitation, considerable Korean forest areas remain, especially in the north.

The climate is about like that of the midwestern United States, except for heavy rainy season in July and August. Annual rainfall is approximately forty inches.

## Laos (Kingdom)

Area: 91,500 square miles.

Population (est. 1953): 1,260,000.

Density per square mile: 13.8.

Ruler: King Sisavang Vong.

Premier: Katay Sasorith.

Principal cities (est. 1953): Vientiane, 20,000 (administrative capital); Luangprabang, 15,000 (royal capital).

Monetary unit: Kip.

Language: Laotian.

Religion: Buddhism.

**HISTORY AND GOVERNMENT.** Sparsely settled Laos occupies the northwestern portion of Indo-China. In the 14th century, a unified Lao kingdom of Lanxang was constituted on both sides of the Mékong river. It was divided in the 17th century into the two kingdoms of Vientiane, which was annexed by Siam in 1827, and Luangprabang, which recognized Siamese suzerainty shortly thereafter. In 1893 both kingdoms passed to France.

Laos was reunited in 1947 as a constitutional monarchy under the Luangprabang dynasty. In 1950 it became an associated state in the French Union. The transfer of sovereignty was completed by the Paris agreements of Dec. 29, 1954. It was admitted to the U. N. in 1955.

Under the Constitution promulgated Mar. 15, 1947, the sovereign exercises executive power through the Cabinet headed by the Premier. Legislative power is vested in a Assembly elected by indirect universal suffrage.

**SOCIAL AND ECONOMIC CONDITIONS.** About half the people are Laotians who live mainly in the Mékong valley, and half



mountain tribes of Chinese and Indo-Chinese extraction. There are sizable Chinese and Vietnamese minorities. Literacy considerably less than 50%.

About 95% of the people are farmers. The chief food crop is rice; others are rice, vegetables, cotton, cardamoms and tobacco. The leading exports are benzoin, opium, and lac; cattle and teak are also exported. Laos is the least developed of the former Indo-Chinese states and has little modern industry. Tin is the only mineral of importance. The northern forests are rich in valuable timber, notably teak; the logs are floated down the Mekong. The latter, in spite of rapids, is the chief transportation route. There are no railroads and few all-weather roads. A road-rail outlet through Thailand to the port of Bangkok is being developed.

**GEOGRAPHY AND CLIMATE.** Northern Laos is mainly a region of forested ridges and plateaus cut by narrow valleys and gorges; narrower southern Laos is a sparsely forested region of terraces. The summers (May-Oct.) are wet, with rainfall up to 80 in., succeeded by a dry season, and cool (Nov.-Feb.) and then hot (Feb.-May).

## Latvia

Area: 24,600 square miles.

Population (est. 1954): 2,100,000 (1940: British, 75.5% [1950: 58%]; Russian, 12%; German, 3.2%; Polish, 2.5%; others, 6.8%). Density per square mile: 85.4.

Principal cities (est. 1954): Riga, 640,000 (capital); Liepaja, 80,000 (seaport). Language: Latvian.

Religions (census 1930): Lutheran, 36%; Roman Catholic, 23.7%; Greek Orthodox, 8.9%; others, 10.8%.

Descended from ancient Aryan stock, the Latvians were early tribesmen who settled along the Baltic Sea and, lacking a central government, fell an easy prey to more powerful peoples. The German Teutonic knights first conquered them in 1158 and divided the area as two states—Livonia and Courland. Poland conquered the territory in 1562 and ruled until 1795 in Courland; control of Livonia was disputed between Sweden and Poland from 1562 to 1629. Sweden controlled Livonia from 1629 to 1721. Russia took over Livonia in the latter year, and Courland after the third partition of Poland in 1795. From that time until 1918, the Latvians remained Russian subjects, although they preserved their language, customs and folklore. The Russian Revolution of 1917 gave them their opportunity for freedom, and the Latvian republic was proclaimed on November 18, 1918.

The republic lasted little more than 20 years. It was occupied by Russian troops in 1939 and incorporated into the U.S.S.R.

in 1940. German armies occupied the nation from 1941 to 1943-44, when they were driven out by the Russians. Most countries, including the United States, have refused to recognize the Soviet annexation of Latvia.

## Lebanon (Republic)

Area: 4,015 square miles.

Population (est. Dec. 31, 1954): 1,450,000 (Arabian, Armenian, Circassian, Turk).

Density per square mile: 361.1.

President: Camille Chamoun.

Premier: Abdullah Yafi.

Principal cities (est. 1954): Beirut, 375,000 (capital, chief port); Tripoli, 120,000 (oil pipe-line terminus).

Monetary unit: Lebanese pound (£L).

Languages: Arabic, French.

Religions (est. 1954): Christian, 54%; Mohammedan, 44%; others, 2%.

**HISTORY.** Smaller than Connecticut, Lebanon lies at the eastern end of the Mediterranean, between Israel and Syria. In ancient times it was the mountainous hinterland of the Phoenician coast towns. From the 7th to the 11th centuries there infiltrated into southern Lebanon the heretics of Islam who finally coalesced into the Druse community.

In the 19th century the Turkish Sultanate encouraged the Druses to wage civil war against the Christian Maronites. After a massacre of 2,500 Christians in 1860, Lebanon was occupied by the French for a year. From 1864 to 1914, a Christian military government ruled the area under nominal Turkish sovereignty. After World War I, France received a League of Nations mandate over Syria and Lebanon. The French drew a Lebanese border in 1920 to offset predominantly Moslem Syria and proclaimed the area a republic under French control on May 23, 1926.

Vichy forces controlled Lebanon after the fall of France in 1940, but the Allies replaced them by July 14, 1941. Despite Syrian objections, the French permitted Lebanon to declare its complete independence on Nov. 26, 1941. Lebanon joined the Arab League and took part in the invasion of Palestine on May 15, 1948.

Bishara el-Khoury, President since 1943, resigned in Sept. 1952 and was succeeded by Camille Chamoun.

**GOVERNMENT.** The modern Lebanese republic is governed by a President elected by Parliament, for a six-year term, and a Cabinet of Ministers appointed by the President, but responsible to Parliament, which has 44 members. The army is based on a cadre of native *troupes spéciales*, formerly part of the French army in the Levant.

**SOCIAL AND ECONOMIC CONDITIONS.** In 1952 there were 182,327 students at-



tending 2,201 state, Moslem, Christian, private, French, American and British schools. Beirut has three universities. Students totaled 3,537 in 1953.

Lebanon produces tobacco, olives, grapes and other fruits, wheat and silk. Manufacturing is confined mainly to local consumers' goods. The silk industry is important in Beirut and Tripoli; cocoon production averages about 6,000 tons annually. Tobacco manufacturing is a government monopoly. An oil refinery was opened at Tripoli in 1950. (Output 1954: 545,665 metric tons.)

The customs union with Syria was dissolved in March 1950. Recent trade data (millions of U. S. dollars):

	1953	1954	1955
Exports	25.4	29.1	33.3
Imports	144.4	174.0	217.6

Leading customers in 1954 were Syria (14%), Saudi Arabia (11%) and Egypt (8%); leading suppliers, Syria (22%), the U. S. (15%) and France (8%). The leading exports were wool, fruits, vegetables, barley and cotton.

A rail line links Beirut with Damascus and Syria. Another, built in World War II by Allied engineers, runs from Tripoli to the Israeli border, and is part of a line from Cairo to Istanbul, via Haifa. One of the oil pipelines from the Kirkuk field in Iraq terminates at Tripoli; the trans-Arabian pipeline from Saudi Arabia ends at Sidon.

**TOPOGRAPHY AND CLIMATE.** The topography is varied. There is a narrow coastal plain, and the steep Lebanon Mountains reach heights of approximately 10,000 feet. There are no large streams. Iron ore deposits are worked in the south, and building stone and marble are plentiful. The country also has thick deposits of inferior lignite coal. Lebanon has hot dry summers (about 80° in Beirut) and cool rainy winters (50°-60° in January). At Beirut, annual rainfall is more than 35 inches.

## Liberia (Republic)

Area: c. 43,000 square miles.

Population (est. 1954): 1,250,000 (native Negro, 99%; American Negro, .8%; white, .1%; others, .1%).

Density per square mile: c. 29.1.

President: William V. S. Tubman.

Principal city (est. 1955): Monrovia, 45,000 (capital and chief port).

Monetary unit: U. S. dollar.

Languages: English (official), native tongues.

Religion: Protestant Christian (official); Mohammedan, Catholic, Pagan.

**HISTORY.** The history of Liberia, Africa's first republic, dates from 1822, when a small colony of freed U. S. slaves was es-

tablished at Cape Mesurado, near the present site of Monrovia. On July 26, 1847, independence was proclaimed, and the first President was Joseph J. Roberts, a Virginian of considerable ability. Throughout the 19th and early 20th centuries the U. S. protected Liberia from British and French encroachments, and in 1903 Liberian finances were placed under U. S. management.

After 1920, considerable progress was made toward opening Liberia's interior, but even today only about 100,000 of its inhabitants are regarded as civilized, and lack of transportation hampers development of the heavily forested inland. In 1942, a U. S.-Liberian agreement admitted U. S. troops to build strategic airports.

In 1944 an agreement provided for permanent U. S. military and naval bases.

**GOVERNMENT.** The government is modeled after that of the United States. The President and Vice President are popularly elected for eight years. The 31-member House of Representatives is elected for four years and the ten-member Senate for six years. Suffrage is extended only to landowners over 21 who are of Negro blood, but a 1946 constitutional amendment provided for the seating in the House of an aborigine from each province in the hinterland. Liberia's army of about 4,000 men is organized on a militia basis.

**SOCIAL AND ECONOMIC CONDITIONS.** Education, compulsory in theory, is conducted in 485 schools, slightly over half state and the remainder mission and private. There are 5 state and 10 mission high schools, 1 state university and 10 mission colleges.

The English-speaking descendants of U. S. Negroes, known as Americo-Liberians, are the intellectual and ruling class. The aborigines, virtually all uncivilized, are divided into some 28 tribes speaking different dialects. Some are Moslems or pagans. Christians include Anglicans, Methodists, Catholics, Baptists and Presbyterians.

Agriculture, on a crude level, is the principal means of livelihood for the tribes. Liberians, who raise coffee, rice, sugar cane and cassava. Native manufacturing is nonexistent except for small industry, and the country's only big enterprise is the million-acre concession granted in 1925 to the Firestone Plantations Company for rubber cultivation. Exports in the year 1955 totaled 43,390 short tons. A large iron ore concession has been developed at the Bomi Hills area by Republic Steel Corp.; the first shipment left Monrovia in June 1951. Exports in 1955 totaled 1,710,000 long tons.

Most of the trade is with the United States. Recent statistics are as follows (in thousands of U. S. dollars):

	1953	1954	1955
Exports	30,998	26,378	42,840
Imports	18,725	22,723	25,965

Chief exports in 1955 were rubber (7%), iron ore (16%) and palm kernels (5%). Leading customers were the U. S. (7%) and the Netherlands (5%); leading suppliers, the U. S. (62%), western Germany (11%) and Britain (11%).

Liberia's first railroad, a 43-mile narrow-gauge line from Monrovia to the Bomi Hills iron-ore concession, began operation in 1951. Coastwise and international air service is supplied by Pan American Airways. Interior travel is still largely by foot with native bearers, but important progress in road construction was made during and after World War II. There are no harbors except a port and naval base completed in 1947 at Monrovia, with U. S. assistance, at a cost of more than \$19,000,000.

**TOPOGRAPHY AND CLIMATE.** Liberia, about the size of Ohio, has a 350-mile coastline on the west coast of Africa, between the Ivory Coast and Sierra Leone. Its only well developed area is a low coastal strip running inland about seven miles. Beyond that is a low plateau, some of it mountainous, traversed by many rivers, of which the Cavalla (Kavalli) and the St. Paul's are the most important. The climate is tropical throughout, with rainfall up to 60 inches a year on the coast.

## Libya (Kingdom)

Area: 679,358 square miles.  
Population (census 1954)\*: 1,091,830  
Berber, with Arab admixture, 93%; Italian, 5%; Jewish, 2%.  
Density per square mile: 1.6.  
Ruler: King Idris I.  
Prime Minister: Mustafa ben Hallim.  
Principal cities (est. 1950): Tripoli, 144,000 (joint capital); Misurata, 70,000 (coastal city); Bengasi, 59,087 (joint capital).  
Monetary unit: Libyan pound (£L).  
Languages: Arabic, Italian.  
Religions: Mohammedan (93%), Christian (5%), Jewish (2%).  
\* Preliminary figures.

**HISTORY AND GOVERNMENT.** Libya, stretching along the northern coast of Africa between Tunisia and Egypt, was a part of the Turkish dominions from the 15th century until 1911. Following the outbreak of hostilities between Italy and Turkey in the latter year, Italian troops occupied Tripoli; Italian sovereignty was recognized the next year by the Treaty of Ouchy.

Libya was the scene of much desert fighting during World War II. After the fall of Tripoli on Jan. 23, 1943, it came under Allied administration. The U. N. General

Assembly voted on Nov. 21, 1949, that Libya should become independent by 1952.

Following the adoption by the constituent assembly of a Constitution, the independence of the country was proclaimed by King Idris I on Dec. 24, 1951.

Under the Constitution, Libya is a hereditary monarchy with a federal form of government. Tripolitania, Cyrenaica and the Fezzan are the constituent provinces. It has a bicameral Parliament consisting of a Senate of 24 members, half named by the King and half by the 3 provincial legislatures, and a House of Representatives elected on a proportional representation basis according to population. The Cabinet, headed by the Prime Minister, is responsible to the federal Parliament.

The ruler, King Idris I, hereditary head of the powerful Senussi sect in Cyrenaica, was born in 1890.

**SOCIAL AND ECONOMIC CONDITIONS.** Tripolitania, with one-sixth the area, has 68% of the population; Cyrenaica has 27% and the Fezzan 5%. About 75% of the population is rural and about 45% of that is nomadic or seminomadic.

Animal husbandry is the basic economic activity, and there are considerable numbers of cattle, sheep, camels and goats. Agriculture is possible only in the Mediterranean coastal region, where dates, olives, citrus fruit, wheat and barley are grown, and in oases in the Fezzan and elsewhere; here the principal product is dates. Sponge and tunny fisheries are carried on off the coast.

Exports in 1954 totaled £L 3,856,791; imports, £L 11,250,671. Important exports include wool, hides, skins, cattle, horses, sponges and esparto grass.

Railroads total 242 miles. A road extends along the coast. The principal means of communication inland are the caravans, which follow traditional routes.

**TOPOGRAPHY AND CLIMATE.** The area has three natural divisions from the coast inland—the Mediterranean coastland, the sub-desert, and the desert.

Winters are cool and summers warm along the coast, and hotter in the interior. Bengasi has an average temperature of 55° in January and 78° in July. Rainfall in the Tripoli area is about 15 inches a year.

## Liechtenstein (Principality)

Area: 61 square miles.  
Population (est. 1954): 14,000 (mostly German).  
Density per square mile: 229.5.  
Ruler: Prince Franz Joseph II.  
Chief of Government: Alexander Frick.  
Principal city (census 1950): Vaduz, 2,735 (capital).  
Monetary unit: Swiss franc.

Language: German.  
Religion: Roman Catholic.

Tiny Liechtenstein lies on the east bank of the Rhine, just south of Lake Constance, between Austria and Switzerland. It abolished its army in 1868 and has managed to stay neutral and undamaged in all European wars which have occurred since that date.

Founded in 1719, Liechtenstein became independent in 1866. Franz Joseph II, the reigning Prince, was born in 1906, and succeeded his great uncle, Franz I, in 1938. In 1943 he married Countess Gina Wilczek, of Austria.

The Constitution of 1921 provided for a legislature, the *Landtag*, of 15 members elected by direct, universal suffrage. Liechtenstein adopted Swiss currency in 1921, and has been part of the Swiss Customs Union since 1924. Its foreign trade statistics are included in those of Switzerland, which also administers the country's telegraph and postal service.

Wheat, wine and fruit are the chief products. There are small manufactures of cotton, leather and pottery.

In 1955 there were 18 elementary and secondary schools, with total enrollment of 2,507.

Liechtenstein's area includes low valley land and upland peaks—Falkais at 8,401 feet, and Naafkopf, 8,432 feet. The chief mineral product is marble.

## Lithuania

Area: 31,200 square miles.

Population (est. 1954): 3,000,000 (1940: Lithuanian, 81% [1950: 55%]; German, 4%; Polish, 3%; Russian, 2%; others, 10%).

Density per square mile: 96.1.

Principal cities (est. 1942): Vilnius (Vilna), 182,000 (capital); (est. 1941) Kaunas, 120,000 (river port).

Language: Lithuanian.

Religions: Roman Catholic, 80%; Lutheran, 5.5%; others, 14.5%.

Southernmost of the three Baltic states, Lithuania in the middle ages was a grand duchy joined to Poland through royal marriage. Poles and Lithuanians merged forces to defeat the Teutonic Knights of Germany at Tannenberg in 1410 and extended their power far into Russian territory. In 1795, however, following the third partition of Poland, Lithuania fell into Russian hands and did not gain its independence until 1918, toward the end of World War I.

The republic was occupied by the U.S.S.R. in 1939 and annexed outright the following year. From 1940 to 1944 it was occupied by German troops and then was retaken by the Soviet Union. Western countries, including the U. S., have not recognized the Russian annexation.

## Luxemburg (Grand Duchy)

Area: 999 square miles.

Population (est. Dec. 31, 1955): 310,000 (Luxemburgian, French, German).

Density per square mile: 319.3.

Ruler: Grand Duchess Charlotte.

Premier: Joseph Bech.

Principal city (est. 1953): Luxembourg 66,382 (capital, iron and steel).

Monetary unit: Luxembourg franc.

Languages: Luxemburgian, French, German.

Religion: Mainly Roman Catholic.

**HISTORY.** Luxemburg is a small buffer state between France, Germany and Belgium. Invaded and occupied in both World Wars I and II despite the fact that its neutrality was guaranteed, Luxemburg suffered most in the latter war, when the Nazis deported several thousand natives as slave labor.

Sigefrol, Count of Ardennes, an offspring of Charlemagne, was Luxemburg's first sovereign ruler. In 1060 the country came under the rule of the House of Luxemburg. From the 15th to the 18th centuries, Spain and Austria held it in turn. The Congress of Vienna in 1815 made it a Grand Duchy and gave it to William I, King of the Netherlands. In 1839 the Treaty of London ceded the western part of Luxemburg to Belgium.

After the Nazi invasion on May 10, 1940, the government fled the country, returning in 1944 after Allied troops had liberated it. In 1948 the grand duchy joined the Western European Union, and in April 1949 it adhered to the North Atlantic Pact.

**GOVERNMENT.** Luxemburg is a constitutional monarchy with the Crown hereditary in the House of Nassau. The sovereign, Grand Duchess Charlotte, was born Jan. 23, 1896. The heir to the throne is Prince Jean, born Jan. 5, 1921.

The Constitution of 1868, as amended in 1919, provides for democratic government through a Chamber of Deputies of 56 members, popularly elected for six-year terms. The Constitution leaves to the sovereign the right to organize the government, which consists of a Minister of State who is President of the government (Premier) and at least 3 other ministers. There is also a Council of State of 15 members, chosen for life by the sovereign.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is compulsory for all children between the ages of 6 and 13. The common or idiomatic language is *letzeburgesch*. German and French are also spoken. Illiteracy is practically unknown.

Although the soil is not very fertile, agriculture is prosperous. Principal crops are potatoes, oats, wheat, rye and grapes. Wine production in 1955 was 2,900,000 U. S. gallons.

The mining and metallurgical industries based on iron ore found in the south, are



the most important. In 1955 an average of 7 blast furnaces produced 3,085,228 metric tons of pig iron. Production of steel ingots was 3,225,330 tons and iron and steel workers numbered 19,581. Electrical energy produced in 1955 totaled 1,104,410,000 kwh. Other industries include brewing, sparkling wine, leather, textiles and cement.

By a customs union between Belgium and Luxemburg which came into force on May 1, 1922, to last for 50 years, customs frontiers between the two countries were abolished. On Jan. 1, 1948, an economic union with Belgium and the Netherlands (Benelux) came into existence. Luxemburg's foreign trade figures are included in those of Belgium and no separate statistics are available; exports consist chiefly of iron and steel products.

Transportation facilities in 1952 included 86 miles of railway, 1,310 miles of state roads and 1,305 miles of local roads.

Luxemburg's prosperity depends largely on its large iron ore deposits (metal content 30%). Production (1955) was 7,204,005 metric tons; exports, 1,722,913 tons.

## Maldiv Islands (Sultanate)

Area: c. 115 square miles.  
Population (est. 1953): 87,000.  
Density per square mile: c. 756.5.  
Sultan: Amir Mohammed Farid Didi.  
Prime Minister: Ibrahim Ali Didi.  
Principal city (est.): Malé, 8,000 (capital).  
Monetary unit: Rupee.  
Languages: Sinhalese (dialect), Arabic.  
Religion: Mohammedan.

The Maldiv Islands, about 400 miles to the southwest of Ceylon in the Indian Ocean, were first visited by the Portuguese in the 16th century. They came under British protection in 1887 and were a dependency of the colony of Ceylon until 1948, when relations with Britain were formalized in a treaty which left domestic affairs in the hands of the islanders.

For centuries a sultanate, the islands adopted a republican form of government in 1952, but the sultanate was restored in Feb. 1954. There is a bicameral legislature which is popularly elected.

The people are great traders and fishermen. Besides fishing, coir making is the chief local industry. Exports include coir, coconuts, copra, millet and fruit.

The islands consist of 12 coral atolls with about 2,000 small islands, of which about 300 are inhabited.

## Mexico (Republic) (Estados Unidos Mexicanos)

Area: 760,373 square miles.  
Population (est. June 30, 1955): 29,679,015 (mestizo, 55%; Indian, 29%; white, 15%; others, 1%).

Density per square mile: 39.0.

President: Adolfo Ruiz Cortines.

Principal cities (census 1950): Mexico City, 2,234,795 (capital); Guadalajara, 377,016 (manufacturing); Monterrey, 333,422 (metallic industries); Puebla, 223,667 (cotton textiles); Mérida, 142,853 (sisal); San Luis Potosí, 125,662 (mineral smelting).

Monetary unit: Peso.

Languages (1940): Spanish, 94%; Indian, 6%.

Religion: Predominantly Roman Catholic.

**HISTORY.** Mexico's early history is shrouded in mystery. At least two civilized races—the Mayas and later the Toltecs—preceded the wealthy Aztec empire conquered in 1519–21 by the Spanish under Hernando Cortez. Spain ruled for the next 300 years until 1810 (the date was Sept. 16 and is now celebrated as Independence Day), when the Mexicans first revolted. They continued the struggle and finally won independence in 1821 by the Treaty of Córdoba.

Turbulent years followed. From 1821 to the first presidency of Porfirio Díaz in 1877, there were two Emperors, several dictators and enough Presidents and provisional executives to make a new government on the average of every nine months. Mexico lost Texas (1836), and after defeat in the war with the United States (1846–48) it lost the area comprising the present states of California, Nevada and Utah, most of Arizona and New Mexico, and parts of Wyoming and Colorado.

In 1855 the Indian patriot Benito Juárez began a series of liberal reforms including the disestablishment of the Catholic Church, which had acquired vast property. A subsequent civil war was interrupted by the French invasion of Mexico (1861), the crowning of Maximilian of Austria as Emperor (1864), and then his overthrow and execution by forces under Juárez, who again became President in 1867.

During the rule of the dictator Porfirio Díaz (1877–80 and 1884–1911) the country was freed from political strife, made substantial economic progress, and gained a respected position in foreign affairs. But Díaz' reactionary land policy led to revolution and his resignation in 1911. The next few years were marked by bloody political-military strife, and trouble with the United States culminating in the punitive expedition into northern Mexico (1916–17) in unsuccessful pursuit of the bandit-politician Pancho Villa.

Lázaro Cárdenas (1934–40), backed by the National Revolutionary party (PRI), began a socialist program of land distribution to peasants, government seizure of foreign-owned oil lands, and broad labor reforms. General Manuel Ávila Camacho, President during World War II, cooperated closely with the United Nations and followed Cárdenas' policy at home.

In July 1946, Miguel Alemán was elected President, backed by the Avila Camacho administration and the PRI. Alemán continued the internal policy initiated by Cárdenas; his administration was marked by continued cordial relations with the United States. Adolfo Ruiz Cortines, the administration candidate, was elected to succeed him in quiet elections held in July 1952; he took office Dec. 1.

**GOVERNMENT AND DEFENSE.** The President, popularly elected for six years and ineligible to succeed himself, governs with a Cabinet of ministers. The Federal Congress has two houses—the 162-member Chamber of Deputies, elected for three years (one for each 150,000 population) and the 60-member Senate, elected for six years. All married male citizens at least 18, and all single male citizens at least 21 are eligible to vote. Women received the right to vote in 1953.

Each of the 29 states has considerable autonomy, with a popularly-elected Governor, legislature and local judiciary. The President appoints the Governors of the two Federal territories, and the governing body of the Federal District.

Military service is compulsory, and the President holds supreme command of the armed forces, through the Secretary of War. The national army, greatly modernized during World War II, numbered about 55,000 men in 1951; the air force had 270 planes and two U. S.-trained squadrons. In Dec. 1955, the navy had 8 frigates and escort vessels and a number of other smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.** *Education.* Illiteracy is one of Mexico's big problems, and the government is trying hard to reduce the rate, estimated at 21 per cent in 1950, as against 60 per cent in 1930. Education is free, compulsory from 6 to 16, separated from the church, and under Federal control. There were 25,613 primary schools in 1952 with an enrollment of 2,925,933 and 544 secondary schools with 85,663 students. The 14 universities had 36,354 students in 1950; 24,542 students attended the University of Mexico at Mexico City.

*Agriculture.* Primitive agricultural methods are steadily giving way to modern practices. More than 17,000,000 acres are under cultivation. About 2,500,000 acres are irrigated, but the eventual total of watered land is expected to be 5,500,000 acres. The Yucatán peninsula, at the southern end of the Gulf of Mexico, raises more than half of the world supply of sisal hemp (121,000 metric tons in 1955).

Production estimates for principal crops in 1955-56 were as follows, in metric tons: wheat, 820,000; maize, 3,200,000; rice, 190,000; coffee, 1,400,000 bags of 132 lb. each; cotton, 466,000; cottonseed, 730,000. Sugar

production in 1954-55 totaled about 962,000 tons.

**Stockraising is important on non-arable land.** Mexico's inventory of livestock in 1951 showed an estimated 14,600,000 cattle, 6,000,000 sheep, and 6,000,000 hogs.

*Industry.* The leading industrial products are cotton cloth and thread, beer, sugar, iron and steel. Other products are flour, soap, cigars and cigarettes, rubber manufactures, vegetable oils, paper, wool, silk, and rayon yarn and cloth, cement, shoes and glass. In 1955, 327,600 metric tons of pig iron and 525,600 tons of steel were produced.

*Trade.* Foreign trade data, in millions of pesos, are as follows:

	1953	1954*	1955†
Exports	4,637	6,300	8,356
Imports	6,985	8,926	11,046

\* The peso was devalued April 19, 1954. † Preliminary.

Chief exports in 1955 were cotton (28%), coffee (12%), lead (8%), copper (7%), and petroleum and products (5%). The U. S. took 75% of the exports and supplied 80% of the imports. Other leading customers were Japan, Britain and western Germany. Leading imports included machinery, vehicles and iron and steel products.

*Communications.* Railway mileage (1951) was 14,575. Total road mileage (1953) was 37,300, of which 15,450 mi. were all-weather. The merchant fleet had 67 vessels (100 tons and over) aggregating 171,677 gross tons on June 30, 1955 (*Lloyd's Register*). Veracruz and Tampico, on the Gulf of Mexico, are the country's most important ports.

*Finance.* Recent government financial data are as follows (in millions of pesos):

	1954*	1955†	1956†
Revenue	5,200	5,700	6,700
Expenditure	5,650	5,700	6,700

\* Preliminary. † Voted estimate.

**NATURAL FEATURES AND RESOURCES.** *CLIMATE.* Mexico is a great, high plateau, open to the north, with mountain chains on east and west and with ocean-front lowlands lying outside of them. It has two big spears—the peninsula of Lower California which is mountainous, and the Yucatán peninsula, which is mostly a low plain. The eastern mountains are marked by high volcanoes.

*Minerals.* Mexico is one of the richest mineral countries in the world. It outranks all other countries in silver production (1955: 47,956,548 fine oz.). Other minerals, with 1955 production, are gold, 382,874 oz.; lead, 210,815 metric tons; copper, 54,675 tons; zinc, 269,399 tons; cadmium, 1,295 tons; manganese, 35,806 tons; coal, 1,342,262 tons; iron ore, 107,565 tons; antimony, 3,816 tons; mercury, 1,036

ons. A considerable variety of other industrial minerals is produced. Deposits of uranium are reported to exist.

Most of the Mexican mining properties are foreign-owned, and the industry is declining in relative importance. The oil fields, lying along the east coast, were seized by the government in 1938, but later the foreign owners were indemnified. There are 15 refineries with daily capacity of 250,000 barrels. Production in the year 1955 was 89,545,000 barrels.

**Forests.** Mexico's forests are of considerable importance; they include pine, oak, mahogany, red and white cedar and primavera. Resins, turpentine and vegetable wax are also produced. Yucatán produces nearly all of the world's chicle, the juice of the sapodilla tree, used as the base of chewing gum.

**Climate.** Partly in the torrid and partly in the north temperate zone, Mexico has three distinct climate regions. From the coasts inland to the plateau it is tropical, with temperatures sometimes topping 100°, but averaging from 77° to 82°. The plateau is sub-tropical with an average of 75°, and the mountains, over 6,000 feet, average 60°. On the east coast the annual rainfall sometimes reaches 100 inches, while in lower California rain hardly ever falls. Rainfall on the plateau is 20 to 40 inches a year, comparable to that of the west central United States. In Mexico City the coldest months are December and January (about 55°); the warmest, April and May (65°). The wet season extends from April to September.

## Monaco (Principality)

**Area:** .59 square mile (375 acres).  
**Population (census 1951):** 20,202.  
**Density per square mile:** 34,240.7.  
**Ruler:** Prince Rainier III.  
**Principal and only cities (census 1951):** Monaco, 1,860; La Condamine, 9,858; Monte Carlo, 8,484.  
**Monetary unit:** French franc.  
**Language:** French.  
**Religion:** Roman Catholic.

A tiny, hilly wedge driven into the French Mediterranean coast nine miles east of Nice, Monaco is a little land of pleasure with a tourist business that runs as high as 1,500,000 visitors a year. Monaco had popular gaming tables as early as 1856. Five years later, a 50-year concession to operate the games was granted to François Blanc, of Bad Homburg. This concession passed into the hands of a private company in 1898.

The Phoenicians, and after them the Greeks, had a temple on the Monacan headland honoring Hercules. From Monacos, the Greek surname for this mythological strong man, the principality took its name. After being independent for 800

years, Monaco was annexed to France in 1793 by the French Revolutionists, and was placed under Sardinia's protection in 1815. In 1861, it went under French guardianship but continued to be an independent country.

Prince Albert of Monaco gave the principality a Constitution in 1911, creating a National Council of 18 members popularly elected for four years. The government is under a ministry, acting on the Prince's authority. The ruler, Prince Rainier III, born May 31, 1923, succeeded his grandfather, Louis II, on the latter's death, May 9, 1949. Rainier was married April 19, 1956, to Grace Kelly, U. S. actress.

## Mongolian People's Republic (Outer Mongolia) (Republic)

**Area:** 614,350 square miles.  
**Population (est. 1954):** 920,000 (Mongol, except for about 100,000 Russians and 50,000 Chinese).  
**Density per square mile:** 1.5.  
**Chairman of Presidium:** Zh. Sambu.  
**Prime Minister:** Y. Tse Den-bal.  
**Principal city (est. 1954):** Ulan Bator, 100,000 (capital).  
**Monetary unit:** Tugherik.  
**Languages:** Mongolian, Russian.  
**Religion:** Lama-Buddhism.

**HISTORY AND GOVERNMENT.** The Mongolian People's Republic, known also as Outer Mongolia, is a Russian satellite that measures more than twice the area of Texas. It contains the original homeland of the historic Mongols, whose power reached its zenith during the 13th century under Kublai Khan. The area accepted Manchu rule in 1689, but after the Chinese Revolution of 1911 and the fall of the Manchus in 1912, the northern Mongol princes expelled the Chinese officials and declared independence under the Khutukhtu or "Living Buddha." In 1921, Soviet troops entered the country and facilitated the establishment of a republic by Mongolian revolutionaries in 1924 after the death of the last Living Buddha. China, meanwhile, continued to claim Outer Mongolia but was unable to back the claim with any strength. Under the Chinese-Russian Treaty of 1945, China agreed to give up Outer Mongolia, which, after a rigged plebiscite, became nominally independent.

The government of the republic is strikingly similar to the Soviet system. The Great Hural or Huruldan (parliament) is elected by universal suffrage, meets at least once in three years and picks 30 members to act as an executive committee—the Little Hural—which in turn selects a presidium of seven members as an interim body. A Cabinet of ten ministers appointed by the Little Hural governs the country.



**SOCIAL AND ECONOMIC CONDITIONS.** A number of young Mongols are regularly sent to the U.S.S.R. for technical training. In 1952, there were said to be 400 primary and secondary schools, 14 technical schools and 21 higher-education institutions.

The country is largely pastoral. There are few areas suitable for crop growing, but some millet, rye and wheat are produced. Most of the people are essentially nomadic or seminomadic; flocks and herds remain the chief source of wealth.

There are a few industrial enterprises. All land, natural resources, factories, mines, hay-making stations and public utilities are nationalized.

Foreign trade, a state monopoly, is carried on mainly with the Soviet Union, but also with Communist China. The leading exports are livestock, wool, hides, animal hair, meat and furs.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The productive regions of Outer Mongolia—a tableland ranging from 3,000 to 5,000 feet in elevation—are in the north, which is well drained by numerous rivers, including the Kerulen, Tola, Orkhon and Selenga.

Reserves of 500,000,000 tons of coal are said to exist in the Nalaikha field near Ulan Bator. Some gold is mined. Deposits of antimony, copper, iron ore, lead, graphite, mercury, sulfur and silver exist.

The climate is continental, with hot summers and cold winters. Mean temperature at Ulan Bator is 15° in January and 64° in July. Rainfall is light throughout the country, and is almost negligible in the Gobi Desert in the southeast.

## Morocco (Monarchy)

(Maroc)

Area: 174,553 square miles.

Population (est.): 9,700,000.

Density per square mile: 55.6.

Ruler: Sultan Mohammed V.

Prime Minister: Si M'Barak Ben Bekkal.

Principal cities (census 1951-52): Casablanca, 682,388 (chief seaport); Marrakesh, 245,312 (trading center); Fez, 179,372 (commercial center); Rabat, 156,209 (French administrative center); Tetuán (census 1950), 80,732 (Spanish administrative center).

Monetary units: French franc, Spanish peseta.

Languages: Arabic, French, Spanish.

Religions: Chiefly Mohammedan.

**HISTORY.** Morocco, about the size of California, is just south of Spain across the Strait of Gibraltar and looks out on the Atlantic from the northwest shoulder of Africa. It was once the home of the Berbers, who helped the Arabs invade Spain in A.D. 711 and then revolted against them and gradually won control of large areas of Spain for a time after 739.

The country was ruled successively by various native dynasties and maintained regular commercial relations with Europe even during the 17th and 18th centuries when it was the headquarters of the famous Salii pirates. In the 19th century, clashes with the French and Spanish became frequent. Finally, in 1904, France and Spain divided Morocco into zones of French and Spanish influence, and these were established as formal protectorates in 1912.

Meanwhile, Morocco had become the object of big-power rivalry, which almost led to a European war in 1905 when Germany attempted to gain a foothold in the rich mineral country. By terms of the Algeiras Conference (1906), Morocco was internationalized economically and France's privileges were limited. War again seemed imminent in 1911, when Germany dispatched a warship to Agadir in an evident attempt to intimidate France. Again the dispute was settled, however, and this time Germany recognized France's right to establish a protectorate over Morocco.

The Tangier Statute, concluded by Britain, France and Spain in 1923, created an international zone at the port of Tangier permanently neutralized and demilitarized. In World War II, Spain occupied the zone ostensibly to insure order, but was forced to withdraw in 1945, and the international rule was re-established.

Sultan Mohammed V was deposed by the French in Aug. 1953 and replaced by his uncle, but nationalist agitation forced his return in Nov. 1955.

France recognized the independence and sovereignty of Morocco on March 2, 1956. Spain followed on April 7, 1956.

**GOVERNMENT.** Pending the adoption of a Constitution, Morocco is an absolute monarchy under the Sultan. He is advised by a Cabinet of Moroccan ministers headed by the Prime Minister.

During a transitional period, the status of the French and Spanish armed forces remains unchanged, but a national army is in the process of formation.

Tangier is governed by an International Administration and a Council of Control composed of the Consuls General of the signatories to the Act of Algeiras. Its future status in Morocco is under negotiation.

**SOCIAL AND ECONOMIC CONDITIONS.** Most of the natives are illiterate; some get rudimentary education in Koranic schools or state-maintained institutions. Education is provided for Europeans.

The natives are Berbers, roughly divided by customs and way of life into three groups—the Riff group along the coast, the central or Berber group in the mid-Atlas Mountains, and the southern or Chleuh in

the high Atlas and the Sus. There is a large Jewish population. Most of the Europeans live in the cities.

Morocco is essentially agricultural. In the former French zone, about 19,600,000 acres are arable, with 1955 production of wheat, 950,000 metric tons; of barley, 1,450,000 tons. Corn, beans, peas, hemp, sorghum, citrus fruits and dates also are raised. Production of olives in 1955 was 25,000 tons. In 1953 there were 13,556,000 sheep and 2,284,000 cattle.

In the former Spanish zone, agriculture is largely undeveloped, but it has potential importance. Barley, wheat, maize and sorghum crops are the most important.

Manufacturing industries introduced by Europeans, mostly small, produce chemicals, flour, leather, stone, beverages and textiles. Native industries include carpet weaving and making Turkish slippers.

Exports from the French zone in 1955 totaled 109,234,000,000 fr.; imports, 164,447,000,000 fr. Chief exports were phosphate (20%), wheat (7%), barley (6%) and citrus fruit. France took 45% of the exports and supplied 48% of the imports, which included sugar, vehicles, petroleum products, cotton cloth and tea. Exports from the Spanish zone in 1951 totaled 300,500,000 pesetas and imports 808,400,000 pesetas. A large proportion of the trade was carried on with Spain. Major exports are iron ore, fish and grain; imports include flour, sugar, tea, wine and textiles. Tangier's exports in 1955 were 2,760,652,000 fr.; imports, 11,672,894,000 fr.

Railroads in 1951 totaled 984 miles in the French zone and 57 miles (standard gauge) in the Spanish zone. Highway mileage in the same year was approximately 7,425 in the French zone, about 540 in the Spanish zone and 65 in Tangier. Casablanca, which handles 80 per cent of the French zone trade, has perhaps the world's largest artificial port.

Exploitation of French Morocco's almost inexhaustible deposits of phosphate is a state monopoly and produced a total of 5,328,000 metric tons in 1955. Other major minerals are coal, cobalt, iron ore, manganese ore, molybdenum, tin, zinc and lead. Iron ore (1955: 1,040,000 metric tons) is the chief mineral of the Spanish zone; others are antimony and manganese.

**NATURAL FEATURES; CLIMATE.** On the Atlantic coast is a fertile plain; the Mediterranean coast is mountainous, making most of the Spanish zone a rugged area. The Atlas Mountains, running north-eastward from the south to the Algerian frontier, average 11,000 feet in elevation.

Morocco's climate is essentially Mediterranean, modified by the Atlantic. On the Atlantic coast the temperatures are relatively cool (at Mogador, 61.5° in January and 72.2° in August). Inland the climate

is more continental, with colder winters and hotter summers (at Fez, 50° in January, 80.6° in August). Rainy seasons are in October-November and April-May (38 inches annually at Tangier, 22 at Rabat, 17 at Casablanca, 11 at Mogador).

## Nepal (Kingdom)

Area: 54,510 square miles.

Population (census 1954): 8,431,537 (Gurkha [predominant], Magar, Gurung, Bhotia [Tibetan], Newar).

Density per square mile: 154.7.

Ruler: Mahendra Bir Bikram.

Prime Minister: Tanku Prasad.

Principal city and capital: Katmandu (estimated population, 108,800).

Monetary unit: Nepalese rupee.

Languages: Parbatia, Gubhajus, Tibetan.

Religions: Hinduism, Buddhism.

**HISTORY.** A landlocked country about the size of Iowa, lying between the Republic of India and Tibet, Nepal has two great distinctions. It contains Mt. Everest, 29,028 feet high, the tallest measured mountain in the world. And it produces some of the toughest fighting men in the world—the Gurkhas.

Led by Rajah Prithwi Narayana, the Gurkhas invaded Nepal from India in 1768 and conquered it. A commercial treaty was signed with Britain in 1792, and in 1816, after more than a year's hostilities, the Nepalese agreed to allow British residents to live in Katmandu, the capital. In 1923 Britain recognized the absolute independence of Nepal. The United States and Nepal signed a treaty of friendship and trade on April 25, 1947. King Tribhubana was deposed on Nov. 7, 1950, but was returned to the throne with Indian assistance on Feb. 15, 1951. On his death Mar. 13, 1955, his son Mahendra became ruler. Nepal was admitted to the U. N. in 1955.

Nepalese troops assisted the British during the Indian Mutiny, the Tibet War of 1904, World War I, the Afghan hostilities of 1919, and World War II.

**GOVERNMENT.** Until 1951, real power was vested in the Prime Minister, nominated by special rules from among the royal family. The King now appoints the Prime Minister and Cabinet members, who are responsible to him. The first commoner Prime Minister, M. P. Koirala, took office in Nov. 1951.

The predominant Gurkhas are essentially a military caste. The army numbers about 20,000 regulars and 25,000 reserves. More than 100,000 Gurkha volunteers fought with the Indian Army in the Burma campaign of World War II.

**ECONOMIC CONDITIONS.** Cultivated and irrigated where possible, the main valley of Nepal grows rice, wheat, maize, sugarcane,

vegetables, spices, sugar cane and potatoes. A few sheep and cattle are grazed. Manufacturing is limited to native handicraft, but jute and textile mills are being established. Trade with India and Pakistan passes through various frontier stations, and there are two mountain trade routes to Tibet.

Main exports include hides, skins, opium, gums, resins, dyes, jute, wheat, pulse, rice, spices and timber. Two railroads enter Nepal for short distances—one from Raxaul, India, to Amlekhganj, the other from Jayauagar to Bijulpura. Transportation is for the most part difficult. A 79-mi. motor road between Katmandu and Raxaul, India, was opened in Dec. 1953.

**NATURAL FEATURES AND RESOURCES:** **CLIMATE.** Along its southern border, Nepal has a strip of level land which is partly forested, partly cultivated. North of that is the slope of the Himalayan Range, including Mt. Everest (29,028 ft.), which was climbed for the first time in 1953, and many peaks higher than 20,000 feet. Mineral resources, nearly all unexploited, include lignite, copper, zinc, lead, sulfur, marble and iron. Southern Nepal has valuable forests which yield gum, timber, resin and dye. Hemp plants grow wild. Mean temperature is 60°, with the hot season from April to June. Most of the rainfall occurs from June to October.

## Netherlands (Kingdom)

(Koninkrijk der Nederlanden)

Area: 12,482 square miles.\*

Population (est. Jan. 1, 1956): 10,821,661 (practically all Dutch).

Density per square mile: 867.0.

Sovereign: Queen Juliana.

Prime Minister: Willem Drees.

Principal cities (est. 1956): Amsterdam, 868,579 (capital, financial center); Rotterdam, 718,509 (chief port); The Hague ('s Gravenhage), 603,987 (seat of government); Utrecht, 246,095 (railway center); Haarlem, 166,764 (tulip center); Eindhoven, 154,604 (industrial center).

Monetary unit: Guilder.

Language: Dutch.

Religions (census 1947): Roman Catholic, 38.5%; Dutch Reformed, 31.0%; other Protestant, 13.3%; Jewish, 0.2%; others and no creed, 17.0%.

\* Excluding waterways and bodies of water larger than 185 acres.

**HISTORY.** Julius Caesar found the low-lying Netherlands inhabited by Germanic tribes, the Nervii, Frisii and Batavi. The Batavi on the Roman frontier did not submit to Rome's rule until 13 A.C., and then only as allies. A part of Charlemagne's empire in the 8th century A.D., the area later passed into the hands of Burgundy and the Austrian Hapsburgs and finally in the 16th century came under Spanish rule. When Philip II of Spain suppressed political liberties and the grow-

ing Protestant movement in the Netherlands, a revolt led by William of Orange broke out in 1568. Under the Union of Utrecht in 1579, the seven northern provinces became the Republic of the United Netherlands.

The Dutch East India Company had been established in 1602, and by the end of the 17th century Holland was one of the great sea and colonial powers of Europe.

Following Napoleon's defeat, the United Netherlands and Belgium became the "Kingdom of the United Netherlands" under William I, son of William V and head of the House of Orange. The Belgians withdrew from the union in 1830, forming their own kingdom. William I abdicated in favor of William II in 1840; the latter was largely responsible for the promulgation of a liberal Constitution in 1848.

The Netherlands continued to prosper during the long reign of William III from 1849 to 1890. The male line of the House of Nassau became extinct with his death in 1890 and he was succeeded by his 10-year-old daughter, Wilhelmina, who was crowned Queen in 1898.

Neutrality was maintained during World War I, but overseas trade suffered heavily from the Allied blockade and German submarine warfare. At the outbreak of World War II neutrality was again proclaimed, but German troops invaded the country May 10, 1940, and by May 15, Dutch forces were ordered to lay down their arms. Queen Wilhelmina and Crown Princess Juliana fled to London, where a government-in-exile was established under Prime Minister P. S. Gerbrandy.

The German army in the Netherlands capitulated May 5, 1945, and on May 23 the Dutch government met once more in The Hague. Queen Wilhelmina abdicated after her fiftieth anniversary as ruler on Sept. 6, 1948, and was succeeded by Juliana, her only daughter.

The Labor party gained a plurality in elections held in June 1952, and Drees continued as Prime Minister at the head of a coalition government.

**RULER.** Queen Juliana, who was born April 30, 1909, was married on Jan. 7, 1937 to Prince Bernhard of Lippe-Biesterfeld (born in 1911). They have four daughters: Beatrix, heiress apparent (born Jan. 31, 1938); Irene (born 1939); Margriet Franciscus (born 1943), and Maria Christina (born 1947).

**GOVERNMENT AND DEFENSE.** The Netherlands is a constitutional and hereditary monarchy, with female succession taking place only in default of male heirs.

Executive power is vested exclusively in the sovereign, while legislative power rests with the sovereign and the States-General (Parliament). The upper chamber



Parliament, with 50 members, is elected for 6 years by the provincial states. The lower chamber, which shares with the government the privilege of initiating new bills and proposing amendments, consists of 100 deputies who are elected directly for four years and retire *en bloc*. Executive power is exercised in part by responsible ministers, headed by the Prime Minister and holding office at the pleasure of the sovereign. Suffrage is universal for all Dutch subjects of 23 years of age. The party standing in the lower chamber (elections of June 1956) is as follows: Labour 43, Catholic 33, Anti-Revolutionary 10, Freedom and Democracy 9, Christian Historical Union 8, Communist 4, Political Reform 2.

Each of the eleven provinces has a local representative body—a Provincial State—presided over by a Royal Commissioner. Each of the 1,014 communes has a locally elected Council and a Mayor appointed by the Crown.

**Defense.** Military service is compulsory. The army had three divisions in 1955, and the air force 300 planes. In Dec. 1955 the navy had 1 fleet carrier, 2 light cruisers, 10 destroyers, 7 submarines, 24 frigates and escort vessels.

**SOCIAL AND ECONOMIC CONDITIONS.**  
**Education.** Education is compulsory from the ages of 7 to 13; illiteracy is almost unknown. In 1953-54, elementary schools numbering 7,456 (of which 4,999 were private) had a total enrollment of 1,393,117; 1,333 secondary schools had 239,811 pupils. The 6 universities and 4 *hogescholen* (vocational colleges) had 27,555 students. The 4 public universities are at Leyden, Utrecht, Groningen and Amsterdam; the 2 private universities are the Calvinist University of Amsterdam and the Roman Catholic University of Nijmegen.

**Agriculture.** Dutch farms are characteristically small, with only a few larger than 250 acres. Wheat (350,000 metric tons in 1955), barley (264,000 tons), rye (465,000 tons), oats (582,000 tons), potatoes (1,907,000 tons) and sugar beets (2,984,000 tons) are grown, but dairying is more important. In 1955 there were 2,995,000 cattle, 2,378,000 hogs, 380,000 sheep and 222,000 horses. Production of cheese (1955: 6,300 metric tons), milk (5,705,000 tons), butter (73,700 tons) and eggs (3,765,000,000) is under state control. Large quantities of vegetables and fruits are raised for export. Almost as important as the dairy industry is the raising of tulip, hyacinth and other flower bulbs in the area around Haarlem. Net value of agricultural and horticultural production in 1954-55 was 923,000,000 guilders.

**Industry.** The Netherlands is a highly industrialized nation, utilizing both over-

seas raw materials and domestic agricultural products. In 1955 there were about 10,700 larger industrial enterprises employing 977,400 workers with gross production valued at 24,153,000,000 guilders. Leading industries are textiles, clothing, shipbuilding, shoes, food, and building materials.

The Netherlands ranks high among the world's shipbuilding nations; 146 vessels of 579,002 gross tons were under construction on Sept. 30, 1955. Production of pig iron in 1955 was 670,400 metric tons; steel, 973,200 tons. Amsterdam is one of the world's leading diamond-cutting centers.

**Trade.** Trade statistics, in millions of guilders (excluding parcel post, specie and diamonds) are as follows:

	1953	1954	1955
Exports	8,059.9	9,058.9	10,211.0
Imports	8,944.9	10,688.1	12,188.9

Principal customers in 1955 were western Germany (17%), Belgium (14%), Britain (12%), the U. S. (6%) and France (5%). Leading suppliers were Belgium (18%), western Germany (18%), the U. S. (14%), Britain (8%) and France (4%). The chief exports were petroleum and coal-tar products (10%), dairy products and eggs (8%), electrical machinery and apparatus (7%) and fabrics and clothing (7%). Leading imports were machinery, iron and steel and manufactures, petroleum and products, cereals and flour and wood and manufactures.

**Communications.** The Dutch merchant marine had 1,400 seagoing vessels of 3,689,618 gross tons on Jan. 1, 1956—the ninth largest fleet in the world. An extensive network of rivers expanded by many canals has led to extensive development of inland shipping. The length of navigable canals and rivers is almost 5,000 miles. River ships and barges numbered 15,487 on Jan. 1, 1956, with a total deadweight tonnage of 4,206,000. In 1955, 110,700,000 metric tons of freight were carried on rivers and canals. The wealth of water transport has obviated the need for wide railway development. In 1954, there were 2,095 miles of railway, all operated by a government-owned company, and, in 1953, 5,170 miles of primary and secondary highways.

Air service is provided by Royal Dutch Airlines (KLM), which flew 36,291,000 miles on 98 routes in 1955 and carried 725,000 passengers.

**Finance.** Recent financial data are as follows (in millions of guilders):

	1954*	1955†	1956‡
Revenue	6,860	6,656	6,117
Expenditure	6,928	7,769	6,697

\* Provisional. † Revised budget estimate. ‡ Preliminary budget estimate.

The national debt on Dec. 31, 1955, including debt to the Netherlands Bank and war damage obligations, totaled 19,689,-000,000 guilders.

**NATURAL FEATURES AND RESOURCES:**  
**CLIMATE:** Part of the great plain of north and west Europe, the Netherlands has maximum dimensions of 190 by 160 miles and is low and flat except in Limburg in the southeast, where some hills rise to 300 feet. About half the country's area is below sea level, making the famous Dutch dikes a requisite to use of much land. Reclamation of land from the sea through dike-building has continued through recent times.

All drainage reaches the North Sea, and the principal rivers—Rhine, Maas (Meuse) and Schelde—have their sources outside the country. The Rhine is the most heavily used waterway in Europe.

Netherlands minerals are few. The only important ones are coal (11,894,600 metric tons in 1955), crude petroleum (7,165,000 barrels), lignite (255,200 tons) and salt. There also are peat swamps and about 600,000 acres of forest. The Netherlands fishing fleet made a catch of 276,300 metric tons valued at 98,800,000 guilders in 1955. Herring (125,900 tons) was the most important item.

Marsh mists, dense sea fogs and a humidity exceeding 80 per cent mark the Netherlands climate. Winters are colder than in eastern England at the same latitude. Utrecht, roughly central in location, has a January average temperature of 34.2° and a July average of 62.6°. Average rainfall for the country is about 28 inches. July-Sept. is the wettest period.

#### NETHERLANDS OVERSEAS TERRITORIES

**NETHERLANDS ANTILLES**—Status: Part of the United Kingdom of the Netherlands.

Area: 366 square miles.  
Population (est. 1955): 181,000.  
Capital: Willemstad (est. 1953: 44,062).  
Governor: A. A. M. Struycken.  
Prime Minister: Ephraim Jonckheer.  
Foreign trade (1955): exports, 1,514,000,-000 florins; imports, 1,566,000,000 florins. Chief export: petroleum products (more than 95 per cent).

Agricultural products: aloes, beans, corn. Manufactures: refined petroleum, straw hats.

Mineral products: lime phosphate, salt.

This comprises two groups of Caribbean islands 500 miles apart; one, about 40 miles off the Venezuelan coast, consists of Curaçao (173 sq. mi.), Bonaire (95 sq. mi.) and Aruba (69 sq. mi.); the other, lying to the northeast, consists of 3 small islands with a total area of 29 square miles. The Dutch acquired the island of Curaçao from Spain in 1634 and have held it since, except for short intervals during the Napoleonic Wars.

The Governor is assisted by an advisory native Legislature and Cabinet. The area has complete autonomy in domestic affairs.

The economy of the Netherlands Antilles is based almost entirely on the refining at Curaçao and Aruba of crude petroleum which comes chiefly from the adjacent Maracaibo fields in Venezuela.

Dutch is the official language, but many inhabitants speak a patois known as *papiamentu*, a mixture of Spanish, Dutch, English, Portuguese, native and other words.

The island of Curaçao has a torrid climate, with average temperatures of 79° in January and 83° in September. Rainfall is light, averaging only 16 inches annually. It occurs mostly in the October-January period.

**SURINAM (Dutch Guiana)**—Status: Part of the United Kingdom of the Netherlands.

Area: 55,143 square miles.  
Population (est. 1954): 234,000.\*  
Capital: Paramaribo (pop. 1952: 86,400).  
Governor: J. Klaasesz.

Prime Minister: J. Ferrier.  
Foreign trade (1954): exports, 55,183,000 Surinam guilders; imports, 51,959,000 guilders. Chief export: bauxite (83%).

Agricultural products: rice (1953: 58,000 metric tons), sugar, coffee.

Minerals (1954): bauxite, 3,462,000 metric tons; gold, 211 kg.

Forest products: balata (1954: 116 metric tons), timber.

\* Including aborigines, numbering about 25,000.

Surinam lies in northeastern South America between British and French Guiana. It was received by the Dutch from England at the Peace of Breda (1667) in exchange for New York and at that time included British Guiana, which was seized by England in 1803 and formally ceded to her at the conclusion of the Napoleonic Wars.

The Governor of Surinam (appointed by the Crown) is assisted by an all-native Legislature and Cabinet, which have some responsibility in all matters relating to domestic affairs.

Mining is the most important activity and only about 65,000 acres are devoted to agriculture. The largest bauxite mines are owned by Aluminum Company of America subsidiaries. In 1946 a company was formed to work 10,000,000 acres of the area's vast, but almost inaccessible, hardwood forests.

In 1948 the heterogeneous population included 2,100 Europeans, 2,560 Chinese, 2,000 Djukas (descendants of escaped slaves), 3,700 aboriginal Indians, 81,750 Negroes and mulattoes, as well as 97,000 Indian and East Indian laborers brought in after the abolition of slavery in 1863 to work the sugar plantations.

From its settled coastal plain, Surinamns back to a virtually unexplored mountain and jungle area along the Brazilian border. Rivers are the chief means of interior travel. The climate is tropical throughout but is modified by the north-easterly trade winds. Yearly range of temperature is approximately 70.5°-90°.

**NETHERLANDS NEW GUINEA—Status:** part of the United Kingdom of the Netherlands.

**Area:** 160,618 square miles.  
**Population (est. 1954):** 700,000.  
**Capital:** Hollandia (pop. 1954: 11,322).  
**Governor:** Jan van Baal.  
**Agricultural products:** sago, coconuts, sugar cane, sweet potatoes.  
**Minerals:** petroleum (1955: 3,418,290 barrels), nickel, chrome.

The western part of New Guinea, second largest island of the world, with smaller adjacent islands, forms part of the kingdom of the Netherlands. The area remained Dutch upon the transfer of sovereignty in Indonesia in Dec. 1949, with the understanding that its status would be determined within one year by negotiation between the Netherlands and Indonesia. Subsequent negotiations did not lead to any agreement.

Dutch influence dates back to the activities of the Dutch East India Company in the 17th century. In 1828, the Dutch government declared Northwest New Guinea part of the Dutch East Indian colonies, and the area was administered as part of the Netherlands Indies until 1949.

The Papuans are the dominant stock; there are also Melanesian and Negrito elements. There were 9,869 Europeans, 10,433 Indonesians and 3,027 other Asiatics (chiefly Chinese) in 1950. Production of petroleum began in 1948 at oilfields in the Vogelkop region (Berau Penin) on the eastern tip of the island. Except for this, commerce and industry are almost unknown and life is primitive, with headhunting and cannibalism not unknown even today.

## Nicaragua (Republic)

(República de Nicaragua)

**Area:** 57,143 square miles.\*  
**Population (est. 1955):** 1,245,000 (1943: mestizo, 69%; white, 17%; Negro, 9%; Indian, 5%).  
**Density per square mile (land only):** 17.

**President:** Anastasio Somoza.  
**Principal cities (census 1950†):** Managua, 9,352 (capital); León, 30,544 (trading center); Granada, 21,035 (trading center); Jinandegá, 13,146 (sugar).  
**Monetary unit:** Córdoba.  
**Language:** Spanish.  
**Religion:** Roman Catholic.

\* Including inland water area of 3,475 square miles.  
† Urban population of municipalities.

**HISTORY.** Nicaragua was first visited by the Spaniards in 1522. The chief of the country's leading Indian tribe at that time was called Nicaragua, from whom the nation derived its name. The country was part of Spanish Guatemala until the general Central American revolution in 1821. Upon the dissolution of the Central American Union in 1838, Nicaragua established itself independently. A United States naval force intervened in 1909 after two American citizens had been executed, and a few U. S. Marines were kept in the country from 1912 to 1925. The Bryan-Chamorro Treaty of 1916 gave the United States an option on a canal route through Nicaragua, and naval bases in the Gulf of Fonseca on the Pacific coast and on Corn Islands on the Atlantic side. Disorder after the 1924 elections brought in U. S. Marines again, but they were withdrawn gradually after the U. S.-supervised elections of 1928, although sporadic fighting continued between government troops and rebel forces under General Augusto Sandino. General Anastasio Somoza was elected President in Dec. 1936, and took office again on May 21, 1950, after national elections.

**GOVERNMENT AND DEFENSE.** The Constitution of 1950 provides for a President popularly elected for six years, and a two-house Congress—a 42-member Chamber of Deputies and a 16-member Senate—both elected for six years. Former Presidents of the republic automatically become Senators. There are sixteen regional departments. Military service is voluntary. The Guardia Nacional, both an army and police force, numbers about 3,500. A naval base built at the Pacific port of Corinto by the U. S. during World War II was turned over to Nicaragua in 1946.

**SOCIAL AND ECONOMIC CONDITIONS.** Although primary education is free and compulsory, about 60 per cent of the people are illiterate. There is one university and several vocational schools. In 1953 there were 3,593 schools of all kinds with 123,832 pupils. Western Nicaragua, with about 75 per cent of the population, is inhabited principally by mestizos of Spanish and Indian blood, with some whites and Indians. Negroes and Indians are dominant in eastern Nicaragua.

More than half of Nicaragua is jungle-covered; agriculture, the leading industry, utilizes only 10 per cent of the total land. Coffee (production 1955-56 season: 355,000 bags of 132 lbs. each) is the chief crop and grows in the western part, which also produces sugar cane, cacao, sesame, beans, rice, tobacco and corn, the chief subsistence crop. Bananas lead in the eastern part, with cotton second. About 900,000 acres are devoted to livestock grazing. Except for some sugar refining, only locally consumed products are manufactured in Nicaragua.



Recent foreign trade data are as follows (in millions of U. S. dollars):

	1953	1954	1955
Exports*	54.5	62.8	78.1
Imports	43.6	58.3	67.1

\* Including gold.

Chief exports in 1955 were cotton (39%), coffee (38%) and gold (10%). Leading customers were the U. S. (38%), Germany (16%) and Japan (14%); leading suppliers, the U. S. (65%), Germany (6%) and the Netherlands Antilles (6%).

Recent public finance data are as follows (in millions of córdobas):

	1953-54*	1954-55†	1955-56†
Revenue	228.0	258.0	238.0
Expenditure	228.0	258.0	240.3

\* Revised budget estimate. † Initial budget estimate.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Largest but most sparsely populated of the Central American nations, Nicaragua is mountainous in the west, with fertile valleys. A plateau slopes eastward toward the Caribbean.

Two big lakes—Nicaragua, about 100 miles long, and Managua, about 38 miles long—are connected by the Tipitapa River. The Pacific coast is bald and rocky; the Caribbean coast, swampy and indented, is aptly called the "Mosquito Coast."

Gold (exports 1955: 229,601 troy oz.) and silver are the most important minerals. One-third wooded, Nicaragua produces mahogany, rosewood, cedar, rubber and ipecac root. In 1954, Nicaragua exported 36,399,000 bd. ft. of logs and lumber.

The highlands are generally cool, while the coasts are hot and sultry. The east coast receives up to 100 inches of rain a year. The wet season is generally from May or June through November or December.

## Norway (Kingdom)

### (Norge)

Area: 125,064 square miles.

Population (est. Dec. 31, 1955): 3,441,000 (Norwegian, 98.7%; Swedish, .8%; others, .5%).

Density per square mile: 27.5.

Sovereign: King Haakon VII.

Prime Minister: Einar Gerhardsen.

Principal cities (est. 1955): Oslo, 447,064 (capital, chief port); (census 1950) Bergen, 112,845 (seaport, shipbuilding); Trondheim, 56,669 (seaport, timber, fish); Stavanger, 50,647 (seaport, fisheries).

Monetary unit: Krone.

Language: Norwegian.

Religions: Evangelical Lutheran (state), 96.8%; others, 3.2%.

**HISTORY.** Norwegians, akin to Swedes and Danes, are of Teutonic origin. In the 7th and 8th centuries, Vikings from Norway constantly attacked the British Isles,

and in the 9th century many of them settled in what are now Ireland and Normandy. Norway became a united kingdom in 872 under King Harald Haarfager. Christianity was introduced in the 10th century by King Olaf I.

Under the rule of Haakon IV (1217-63) Norway reached a peak of power, ruling the Shetland and Orkney Islands, Iceland, Greenland and the Hebrides. In 1319 Norway and Sweden were united under King Magnus VII, and in 1397 Denmark joined this union under Erik of Pomerania.

In 1450 the triple bond gave way to union in which Norway was closer to Denmark, but the Treaty of Kiel, in 1814—the end of the Napoleonic Wars, ceded Norway to Sweden. Norway protested and declared itself independent. Sweden then upon invaded Norway and forced the issue, requiring Norway to recognize the King of Sweden but leaving Norway its own government, army, navy and customs.

After this union was dissolved in 1905 Prince Karl of Denmark was elected King of Norway by the Storting (parliament) and ascended the throne as Haakon VII. During World War I, Norway was able to preserve its neutrality, though it suffered greatly from the Allied blockade and from the loss of many merchant ships. In World War II, Norway was invaded by the Germans on April 9, 1940, and resisted for two months before Nazi control was complete. On June 7, King Haakon and the government fled to London and established a government-in-exile.

Meanwhile, in Norway, a new word was born—quisling. It was derived from Major Vidkun Quisling, a Norwegian traitor who collaborated with the Germans and who was Minister President of the German-sponsored occupation government. Quisling eventually was executed by the Norwegians in Oct. 1945.

King Haakon and the government returned immediately after the German collapse in May 1945, and an interim coalition Cabinet took over, headed by Einar Gerhardsen. The latter's Labor party won a majority in the general elections of Oct. 8, 1945, and an all-Labor Cabinet formed on Nov. 5, 1945, led the nation thereafter.

Despite Soviet pressure, Norway adhered to the North Atlantic Pact in April 1949. **RULER.** Haakon VII, born August 3, 1872, second son of Frederick VIII of Denmark, married Princess Maud (born 1869, died 1938), third daughter of Edward VII of England. Their one son—Olaf, Crown Prince, born July 2, 1903—married Princess Märtha of Sweden (1901-1954) March 21, 1929. Their children are Prince Ragnhild Alexandria (born 1930), Princess Astrid (born 1932) and Prince Harald (born 1937). King Haakon is the uncle of Frederick IX of Denmark.

GOVERNMENT AND DEFENSE. Norway is constitutional and hereditary monarchy with succession in the direct male line. The King's executive power is exercised by the Council of State, or Cabinet, consisting of the Prime Minister and at least seven other councilors. The 150 members of the Storting are popularly elected for a term of four years under proportional representation. When assembled, the Storting divides itself by election into two sections, the Lagting, composed of one-fourth of the members (38) and the Odelsting, composed of the rest. The Storting has a predominant position in the government since the Cabinet is responsible to it. Moreover, the Storting cannot dissolve it before the expiration of its term. There is universal suffrage for all citizens, male or female, over 23. Party representation in the Storting (elections of Oct. 12, 1953) is Labor 77; Conservative 27; Liberal 15; Agrarian 14; Christian People's 14; Communist 3.

The Department of Defense serves as a coordinating body for the army, navy and air force. The army is a national militia with compulsory service from 18 to 55. Army strength in 1955 was about 20,000. The navy in Dec. 1955 had 5 fleet destroyers, 8 submarines, 12 frigates and 12 escort vessels and other minor ships.

SOCIAL AND ECONOMIC CONDITIONS. Education is compulsory and free from 7 to 14. Illiteracy is almost unknown. In 1952-53, elementary schools had enrollment of 355,655 and secondary schools had 10,296. There are 2 universities—Oslo (23,308 students in 1953) and Bergen (382).

Land suitable for cultivation, estimated at less than 5 per cent of the total area, consists of strips in the deep narrow valleys and around fiords and lakes. Food-stuff production is insufficient to meet domestic needs. Leading crops, with 1955 production in metric tons, are wheat, 32,000; barley, 205,000; oats, 98,000; potatoes (1954), 1,130,000; hay and fodder. The country is more adapted to stock raising than to crop growing; in 1955, there were 171,280 cattle, 1,921,897 sheep, 464,004 pigs and 115,557 goats.

Raw materials produced in Norway form the basis of most of the manufactures. Leading industries are food, machinery, metals, wood, paper and electro-chemicals. In Sept. 30, 1955, 61 vessels of 240,559 gross tons were under construction in Norwegian yards.

Statistics of foreign trade are as follows, in millions of kroner:

	1953	1954	1955
Exports	3,633	4,163	4,528
Imports	6,514	7,276	7,782

In 1955 the leading customers were Britain (22%), western Germany (11%), the U. S. (9%) and Sweden (9%). Leading

suppliers were Britain (20%), Sweden (16%), western Germany (14%) and the U. S. (9%). Chief exports were base metals (20%), fish and fish preparations (15%), pulp and waste paper (12%) and paper and manufactures (10%).

The normally adverse trade balance is offset to some extent by invisible exports, particularly the earnings of the large merchant marine.

Norway is one of the greatest seafaring nations, and its merchant marine of 2,351 vessels (100 tons and over) of 7,249,087 gross tons (June 30, 1955) is the third largest in the world. The long Norwegian coast line and the difficulties of inland transportation make coastal shipping important. In 1954 there were 2,800 mi. of railway; (1953) 28,800 mi. of highway.

Recent public finance data are as follows, in millions of kroner:

	1954-55	1955-56*	1956-57†
Revenue	4,605	4,577	4,975
Expenditure	4,608	4,577	4,975

\* Voted budget. † Budget estimate.

The public debt on Dec. 31, 1955, was 6,452,139,819 kr.

NATURAL FEATURES AND RESOURCES; CLIMATE. Nearly 70 per cent of Norway is uninhabitable and covered by mountains, glaciers, moors and rivers. Its extreme length from the Skagerrak to North Cape—Europe's most northerly point, far above the Arctic Circle—is about 1,100 miles. Breadth averages 60 miles, with a maximum of 260. The hundreds of deep fiords that cut into Norway's coast line give it an over-all ocean front of more than 12,000 miles. Islands off the coast, numbering almost 150,000, form a breakwater and make a safe coastal shipping channel. The Lofoten and Vesterålen Islands, off the north-west coast, have an area of about 1,560 square miles.

Mineral resources are extensive, but coal deposits are entirely lacking except in Spitsbergen. Important minerals (1955 production in metric tons): iron ore (metal content 65%), 1,256,000; aluminum, 77,900; pyrite ore, 840,000; zinc, 44,200; and copper ore, molybdenum ore, tungsten, antimony ore, tin, silver.

Cheap electric power, produced mainly by hydroelectric plants (production 1955: 22,272,000,000 kwh.), makes possible the extraction of nitrogen from the air and manufacture of potassium nitrate, an important fertilizer.

The forests, largely in the south and southeast, are one of the chief natural resources. About 25 per cent of the total area is covered with forests, of which 70 per cent is pine. Timber production in the 1954-55 season was about 7,300,000 cu. m. Production of paper and cardboard in 1955

was 596,000 metric tons; chemical pulp, 618,208 tons; mechanical pulp, 647,221 tons; pulpwood (1954), 4,900,000 cu. m.; newsprint (1954), 164,000 tons.

Fishing is one of the principal industries, engaging as many as 100,000 persons annually. A large number of the best European food fisheries are situated along the coast. The 1955 catch totaled 1,635,000 metric tons valued at 600,000,000 kr. Norwegians are the world's leading whalers and were the first to develop pelagic (open sea) whaling. Whale oil production in the 1954-55 season was 877,000 barrels.

The Gulf Stream affects the climate mildly. Summer temperatures range from about 50° in the extreme north to 60.6° at Oslo in July. February temperatures in Oslo average 24°, against 11° to -12° in the north. Norway is one of the lands of the midnight sun; in the extreme north for many weeks in the summer the sun never sets, and for an equal time in the winter the sun does not rise. Rainfall is heavy in the coastal regions but decreases sharply inland.

## OUTLYING TERRITORIES

### SPITSBERGEN (SVALBARD).

This arctic archipelago, with an area of 23,957 square miles, lies about 400 miles north of Norway and consists of West Spitsbergen (about 15,000 sq. mi.), North-East Land (about 6,000 sq. mi.), Edge Island (2,300 sq. mi.), Barents Island (580 sq. mi.), and several small islands including Bear Island. The group was probably discovered by Norwegians in A.D. 1194 and rediscovered by the Dutch navigator Barents in 1596. The question of sovereignty was long unsolved. By a treaty signed with the disputing nations on Feb. 9, 1920, however, Norwegian sovereignty was recognized, and Norway declared the area a part of the kingdom Aug. 14, 1925. Spitsbergen was occupied by Allied forces in the summer of 1941. Soviet proposals for establishment of joint military bases were rejected by Norway in Feb. 1947.

In the 18th and 19th centuries, Spitsbergen was a whaling center, but now the only important product is coal, which is mined by both Norwegians and Russians (1955 Norwegian exports: 295,000 metric tons). Population (1952-53) 3,257, largely miners, none indigenous.

### JAN MAYEN ISLAND.

This arctic island (144 sq. mi.), lying between Greenland and the north of Norway, was discovered by Henry Hudson in 1607. It was annexed to Norway May 8, 1929. A Norwegian weather station was established in 1921, and during World War II a U. S. Navy weather station was maintained on the island. It is otherwise uninhabited.

**OTHER TERRITORIES.** Norway also exer-

cises sovereignty over Bouvet Island (46 sq. mi.) in the South Atlantic, Peter I Island (94 sq. mi.) in the Antarctic Ocean, and that part of the Antarctic continent lying between 20 degrees and 45 degrees east. All are uninhabited.

## Outer Mongolia. See Mongolian People's Republic

## Palestine. See Israel; Jordan

## Panamá (Republic) (República de Panamá)

Area: 28,753 square miles.

Population (est. July 1, 1955): 911,400 (1940: mestizo, 65.34%; Negro, 13.31%; white, 11.07%; Indian, 9.53%; others, 7.75%).

Density per square mile: 31.7.

President: Ernesto de la Guardia, Jr.

Principal cities (census 1950): Panamá City, 127,874 (capital and chief port); Colón, 52,204 (chief Caribbean port); Ciudad David, 14,847 (bananas).

Monetary unit: Balboa.

Language: Spanish (official).

Religion: Roman Catholic, 93%; Protestant, 6%; others, 1%.

**HISTORY.** Visited by Columbus in 1492 on his fourth voyage and explored by Balboa in 1513, Panamá was the principal transshipment point for Spanish treasure and supplies to and from South and Central America in colonial days. In 1821 when Central America revolted against Spain, Panamá joined Colombia, which at the time had declared its independence. For the next 82 years, Panamá attempted unsuccessfully to break away from Colombia. After U. S. proposals for canal rights over the narrow isthmus had been rejected by the Colombian Senate, Panamá proclaimed its independence with U. S. backing in 1903. U. S. Marines restrained Colombian intervention.

For canal rights in perpetuity, the United States paid Panamá \$10,000,000 and agreed to pay \$250,000 each year, increased to \$430,000 after devaluation of the U. S. dollar in 1933 and to \$1,930,000 under a revised treaty signed Jan. 25, 1955. In exchange, the United States got the Canal Zone, a ten-mile-wide strip across the isthmus, and a considerable degree of influence in Panamanian affairs.

During World War II the U. S. was granted the right to establish a number of bases in Panamá. All were evacuated in 1948 after the Assembly rejected a 10-year lease agreement on Dec. 22, 1947.

**GOVERNMENT.** Under the 1946 Constitution, the Assembly and the President a-



ected for 4-year terms, with the President ineligible to succeed himself. Panama has no army or navy, but has a national police corps numbering 2,000.

**SOCIAL AND ECONOMIC CONDITIONS.** Although education is free and compulsory between 7 and 15, 28.3% of the population 10 years of age and over (excluding tribal Indians) could not read and write in 1950. In the year 1954-55 there were 1,081 public and private primary schools with enrollment of 132,743; post-primary students numbered 23,783 and the national university at Panamá City had 1,955 students.

About five-eighths of the nation is unoccupied. A fourth of the population is in Colón and in Panamá City, the oldest white settlement on the Pacific coast of the Americas. In the cities, the lower classes are Negro and Negroid, descendants of British West Indian laborers on the canal.

Bananas are the main agricultural crop; others are cacao, tobacco, abacá, rubber, rice, coffee and sugar cane, all of which are exported, as are cattle, hides and gold. Imports in 1954 were \$72,620,601; domestic exports, \$17,431,298; re-exports, \$1,975,665. Chief exports were bananas (57%) and cacao (17%). Leading customers were the U. S. (94%), Venezuela and Colombia; leading suppliers, the U. S. (82%), Canal Zone, Britain.

The Panama Canal is the country's biggest economic asset. About a third of the national income is ordinarily derived from the wages of Panamanians working in the Canal Zone, or from cash spent by U. S. personnel in the Zone.

The main railway is the U. S. Government-owned Panamá Railroad, 47.64 miles long, bridging the isthmus from Panamá City to Colón. In recent years many foreign ships have been registered in Panamá to escape high labor costs and governmental regulations in other nations; in 1955, the merchant marine consisted of 555 vessels (100 tons and over) of 3,922,529 gross tons, making it one of the largest in the world.

**NATURAL FEATURES; CLIMATE.** Panamá, roughly the size of South Carolina, runs east to west for 420 miles from Costa Rica to Colombia, and has a maximum width of 88 miles, with 477 miles of Caribbean coast and 767 on the Pacific. At the narrowest and lowest point, the canal bisects the country. Outlying islands number about 630 in the Caribbean and 116 in the Pacific. Panamá steps up from coastal lowlands, with extremely heavy rainfall (150 inches or more), to upland valleys and plateaus covered by dense forest and a few mountain peaks, some volcanic, near the Costa Rican border.

## Paraguay (Republic) (República del Paraguay)

Area: 157,047 square miles.

Population (est. 1955): 1,565,000 (1950: mestizo, 94.9%; white, 3.0%; Indian, 2.1%).

Density per square mile: 10.0.

President: Gen. Alfredo Stroessner.

Principal cities (census 1950): Asunción, 201,340 (capital); Villarrica, 14,680 (sugar, tobacco); Concepción, 14,640 (port, Paraguay river); Encarnación, 13,321 (rail terminus).

Monetary unit: Guaraní.

Languages: Spanish (official), Guaraní.

Religion: Roman Catholic (official).

**HISTORY.** Paraguay, a landlocked South American country with a good river outlet to the South Atlantic, is about the size of Montana and, more often than not, is under the rule of a dictator-president.

In 1526 and again in 1529, Sebastian Cabot explored the area when he sailed up the Paraná and Paraguay Rivers. Domingo Martínez de Irala, a Spaniard, founded Asunción in 1537 and became the dominant figure in Paraguay for the next two decades. From 1608 until their expulsion from the Spanish dominions in 1767, the Jesuits maintained an extensive establishment in the south and east of Paraguay. In 1811 Paraguay revolted against Spanish rule and became a nominal republic under two Consuls, one of whom, Dr. José Rodríguez Francia, ruled as absolute dictator until his death in 1840. His dictator successor, Carlos Antonio López, was succeeded in 1862 by his son, Francisco Solano López, under whose leadership Paraguay lost a good part of its population in a disastrous five-year war with Argentina, Brazil and Uruguay.

Paraguay remained neutral in World War I. Economic and financial exhaustion resulted from the war with Bolivia (1932-35), after which Paraguay was awarded three-fourths of the disputed Gran Chaco region (1938).

Juan Natalicio González, elected President in the Feb. 1948 elections, took office Aug. 15, but successive revolts on Jan. 30 and Feb. 26, 1949, ousted him and his successor. The leader of the latter revolt, Felipe Molas López, was elected President on Apr. 17, but gave way to Federico Chaves on Sept. 11, 1949. Chaves was re-elected Feb. 15, 1953, but he was ousted by the army on May 5, 1954, and on July 11 Gen. Alfredo Stroessner was elected to complete his term.

**GOVERNMENT AND DEFENSE.** Since adoption of the 1940 Constitution, Paraguay has been a semi-authoritarian republic which elects a President every five years by popular vote, and a one-house Congress on a population basis. There is also a Council of State, somewhat equivalent to an upper house, its members named

by the government. The presidentially-appointed Cabinet administers the government and is required merely to inform the Congress and Council of its policy.

The army numbers approximately 6,000. Military service is compulsory for two years. For patrolling the Paraguay River, the country's life line, there is a navy of about 1,400 men with two gunboats and three armed patrol boats.

**SOCIAL AND ECONOMIC CONDITIONS.** The illiteracy rate is unofficially estimated at 60 per cent, one of the highest in South America. Education is free and supposedly compulsory. In 1953 there were 252,393 pupils attending 1,794 elementary schools. The University of Paraguay at Asunción had 2,100 students in 1953, and there are several normal and agricultural schools.

The Paraguayans are a homogeneous blend of Spanish, Portuguese and Italian, with considerable Guaraní Indian blood. There are almost no Negroes; the 35,000 to 50,000 uncivilized Indians live mainly in the Chaco. The country is 90 per cent bilingual, with Guaraní dominating over Spanish (the official language) in rural areas.

A well-favored land, Paraguay is predominantly a cattle country, keeping about 4,000,000 head. The soil is fertile and the climate suitable for subtropical crops. The chief cash crop is cotton (acreage: 150,000; 1955 ginned output: 13,000 metric tons); the staple food crop is manioc. Other crops are rice, maize, yerba maté, tobacco, sugar, peanuts and fruits. Oil of petit-grain, an important perfume ingredient, is extracted from the leaves of the bitter orange.

Foreign trade data are as follows (in millions of U. S. dollars):

	1953	1954	1955
Exports	25.36	33.97	35.10
Imports	24.31	32.88	28.96

Chief exports in 1954 were timber (32%), cotton (19%) and quebracho extract (12%). The U. S., Argentina and Uruguay were the principal customers; the U. S., Argentina and Britain were leading suppliers.

Railway mileage is about 715. In 1954 there were some 800 mi. of modern highways. Domestic air service is furnished by the nationalized Línea Aérea de Transporte Nacional (LATN). Several foreign lines supply international service.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Eastern Paraguay, between the Paraná and Paraguay Rivers, is upland country with the thickest population settled on the grassy slope that inclines toward the Paraguay River. The greater part of the Chaco region, to the west, is covered with marshes, lagoons, dense tropical forest and jungle.

Forest resources are considerable, especially in the Chaco. Quebracho—the

"Axe-breaker," a wood so heavy that will not float—is the principal commercial tree. The wood has many uses, from paving blocks to ox-cart wheels. Quebracho tannin extract is the chief product. Its export limited by agreement with Argentina.

In the east, temperature averages about 81° in summer (December–February) and 64° in winter (May–August). From Asunción, with an annual average greater than 60 inches, the rainfall decreases in the west.

## Peru (Republic) (República del Peru)

Area: 432,258 square miles.

Population (est. 1955): 9,396,000 (white and mestizo, 53%; Indian, 46%; Asiatic Negro and others, 1%).

Density per square mile: 19.5.

President: Manuel Prado y Ugarteche.

Principal cities (est. Dec. 31, 1952): Lima, 926,400 (capital); Callao, 104,500 (port); Lima; Arequipa, 100,900 (commercial center); Cuzco, 58,200 (ancient Incan capital); Trujillo, 49,600 (mining).

Monetary unit: Sol.

Languages: Spanish, Quéchua, Aymara (Indian).

Religion: Roman Catholic.

**HISTORY.** Peru, once part of the great Incan empire and later the major vicereignty of Spanish South America, is more than three times the size of California. It was conquered in 1531–33 by Francisco Pizarro. On July 28, 1821, Peru proclaimed its independence, but the Spanish were not finally defeated until the Battle of Ayacucho on Dec. 9, 1824. For a hundred years thereafter the Peruvian course was rough. Revolutions were frequent, and a new war was fought with Spain in 1864–66. The dispute with Chile over Tacna and Arica was not finally settled until 1929.

Peru emerged from 20 years of dictatorship on July 28, 1945, with the inauguration of President José Luis Bustamante y Rivero after the first free election in many years had been held. In a Cabinet reorganization of Jan. 12, 1947, three members of the leftist APRA party, which had contributed largely to Bustamante's election, were eliminated. The rightist-APRA cleavage came to a head on Oct. 28, 1948 when an army-led rightist revolt headed by Gen. Manuel A. Odría ousted Bustamante. Odría was unopposed in presidential elections held July 2, 1950. Conservative Manuel Prado y Ugarteche, President from 1939 to 1945, was chosen by a narrow margin to succeed him in elections held June 22, 1956.

**GOVERNMENT AND DEFENSE.** Under the 1933 Constitution, Peru elects by popular vote every six years a President, two Vice Presidents and a bicameral Congress—Senate of 52 members and a Chamber of

2 members. The President is ineligible to succeed himself. The Cabinet, headed by the Prime Minister, is presidentially appointed.

Military service is compulsory at the age of eighteen. The authorized strength of the army is 32,000. The navy in 1955 had 6 frigates and escort craft, 6 submarines and other smaller units. There are about 9,000 police and civil guards.

**SOCIAL AND ECONOMIC CONDITIONS.** Peru, once the cultural center of Spanish South America, has an illiteracy rate of over 50 per cent. Education between 7 and 13 is free, compulsory and state-controlled. Public and private primary schools numbered 11,769 in 1953 with 1,046,836 pupils; 14 state secondary schools had 47,873 students and 204 private secondary schools, some run by religious orders, had 35,471. Five universities had 13,521 students in 1952, including the University of San Marcos, founded in 1551 (oldest in America) with 8,771.

Most Peruvians are of mixed Spanish and Indian blood. The Indians come from three main stocks—Quéchua, Aymará (Colla) and Chunchu. There is a relatively large Asiatic population.

Land under cultivation is estimated at only slightly more than 10 per cent of the total area, with more than 80 per cent of the population being dependent upon agriculture. About one-eighth of the cultivated area in the irrigated coastal valleys of the central region is devoted to cotton, the most important crop (1955-56 production: 9,000 metric tons). Sugar (1954-55: 608,000 tons), rice, tobacco and coffee are exported, while wheat, corn, potatoes, beans, barley and quinoa (a grain similar to millet) are subsistence crops. Stock-raising, pursued in the Pacific highlands and the elevated parts of the Amazon slope, supplies most of the country's meat needs, as well as wool, hides and skins for export. Llamas, used as beasts of burden, and vicuñas and alpacas, noted for their wool, are native to Peru. Livestock estimates in December 1954 showed 3,476,000 cattle, 16,821,000 sheep, 1,346,000 hogs (1953) and 3,80,000 alpacas and llamas (1952).

Industrialization has been slow. Aside from the copper smelters and oil refineries, the greatest progress has been made in the textile industry, which obtains its raw materials from domestic cotton and wool and from imported silk.

Foreign trade statistics, in millions of dollars, are as follows:

	1953	1954	1955
Exports	3,752	4,792	5,146
Imports	4,945	4,916	5,764

Chief exports in 1954 were cotton (26%), sugar (13%), lead (11%) and copper (7%).

Chief suppliers were the U. S. (52%), Britain (9%) and Germany (8%); chief customers, the U. S. (36%), Britain (14%) and Chile (11%). Principal Peruvian imports are machinery and motor vehicles, foodstuffs (especially wheat), iron and steel manufactures, electrical goods and chemicals.

Highway mileage in 1951 totaled 19,500, of which more than a third is hard-surfaced; the Pan-American highway had a total Peruvian length of 1,818 miles. Railway mileage (1951) was 2,800.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The Andes Mountains divide Peru into three sharply differentiated zones. To the west is the coastland, much of it arid, extending for 50 to 100 miles inland, and 1,400 miles long.

The mountain area, with peaks over 20,000 feet high, lofty plateaus and deep valleys, lies centrally. Beyond the mountains to the east is the heavily forested slope leading to the Amazonian plains.

Peru has vast mineral resources. It ranks fifth in world silver production and mines about 25 per cent of the world's vanadium. But mining is second to agriculture, and nearly all of it is in the hands of foreign capital. Petroleum and copper are the most important, with the latter controlled by the American-owned Cerro de Pasco Corporation, which also accounts for much of the gold and silver output. In 1955 gold production was 160,310 oz.; silver, 20,954,823 oz.; copper (smelter), 35,478 short tons; lead, 67,303 tons; zinc (in ore), 166,718 tons; iron ore (metal content 60%), 1,950,000 tons. Petroleum production in 1955 was 17,280,000 barrels; discovery of rich new deposits has been reported.

Forest products include rubber (1953: 3,311 metric tons), balata, raw quinine, vegetable ivory, mahogany, cedar, dye woods and coca, the source of cocaine. An important industry on the outlying islands is the gathering of guano (bird excrement), a valuable fertilizer used almost entirely domestically.

The climate ranges from tropical in the eastern lowlands to arctic among the snow-capped peaks. The coastal area has an average annual rainfall of less than 2 inches and temperatures ranging between 55° and 98°. Temperatures range from 75° to 95° in the humid Montaña, and rainfall between 75 and 125 inches annually.

## The Philippines (Republic)

Area: 114,830 square miles.

Population (est. July 1, 1955): 21,848,800 (Filipino, except [1948] 121,702 Chinese, 6,955 Americans, 1,886 Spanish and 3,319 others).

Density per square mile: 190.3.

President: Ramón Magsaysay.



Principal cities (est. 1952): Manila, 1,158,260 (seat of government, chief port); Cebu, 175,950 (seaport); Quezon City, 159,730 (lumber); Bacolod 126,200 (sugar); Zamboanga, 124,710 (seaport).

Monetary unit: Peso.

Languages: English, Tagalog, Bisayan, Spanish, Ilocano, Bicol.

Religions (census 1948): Roman Catholic, 82.9%; Aglipayan (Independent Philippine Catholic), 7.6%; Mohammedan, 4.1%; Protestant, 2.3%; others and no religion, 3.1%.

**HISTORY.** Fernando Magellan, the Portuguese navigator in the service of Spain, discovered the Philippines on March 16, 1521, and 21 years later a Spanish exploration party named the group of islands in honor of Prince Philip, later Philip II of Spain. Spain retained possession of the islands for the next 350 years.

The Philippines were ceded to the United States in 1899 by the Treaty of Paris after the Spanish-American War. Meanwhile the Filipinos, led by Emilio Aguinaldo, had declared their independence. They continued guerrilla warfare against U. S. troops until the capture of Aguinaldo in March 1901. By July 1902, peace was established in all parts of the islands except those inhabited by the Moros.

The first U. S. civilian Governor-General was William Howard Taft (1901-04). The Jones Law (1916) provided for the establishment of a Philippine Legislature composed of an elective Senate and House of Representatives. The Tydings-McDuffie Act (1934) provided for complete Philippine independence in 1946. Under a Constitution approved by the people of the Philippines May 14, 1935, the Commonwealth of the Philippines was inaugurated on Nov. 15 under the presidency of Manuel Quezon y Molina, who was re-elected in 1941.

The Philippines were invaded by Japanese troops on Dec. 8, 1941 (Philippine time), and after the fall of Bataan and Corregidor, President Quezon and his government fled to Washington. The Japanese-sponsored "Philippine Republic" received little support from most Filipinos. U. S. forces led by Gen. Douglas MacArthur re-invaded the islands in Oct. 1944, and after the liberation of Manila (Feb. 1945), Sergio Osmeña, who had succeeded to the presidency on the death of Quezon (Aug. 1, 1944), re-established the Philippine government.

Brig. Gen. Manuel A. Roxas y Acuña, who defeated Osmeña in the elections of April 1946, became first head of the new independent republic, which came into existence on July 4, 1946, as scheduled in the Tydings-McDuffie Act. He died April 15, 1948, and was succeeded by the Vice President, Elpidio Quirino. The latter was

re-elected on Nov. 8, 1949, but lost a second bid for re-election to Ramón Magsaysay who took office on Dec. 30, 1953.

**GOVERNMENT AND DEFENSE.** Under the Constitution of 1935 (as amended in 1940) the Philippines have a republican form of government based on that of the United States. Executive power is exercised by the President, popularly elected for a 4-year term and assisted by a Cabinet appointed by him. The popularly elected Congress has two houses—the Senate with 24 members and the House of Representatives with 100 members.

Party standing in the House of Representatives (elections of Nov. 10, 1953) was as follows: Nationalist 64, Liberal 2, Democratic Nationalist 10.

The Philippine army has been reorganized and re-equipped with U. S. assistance. An agreement signed March 14, 1947, provided for the establishment, for a 99-year period, of 23 U. S. military, naval and air bases in the islands. Army strength was about 55,000 in 1953. A mutual defense treaty with the U. S. was signed Aug. 3, 1951.

#### **SOCIAL AND ECONOMIC CONDITIONS**

**Education.** Education is free. The illiteracy rate (10 years and over) was 30% in 1953. In 1953-54 there were 3,580,741 pupils in the 25,197 public schools; 1,789 private schools had 697,235 pupils. The state-supported University of the Philippines had 12,028 students. Tagalog is the national language but English and Spanish are used throughout the country.

**Agriculture and Industry.** Agriculture is the chief industry. Average size of farms is 10 acres, but there are many large plantations. Rice (palay) is the staple native food cereal, but production (3,202,900 metric tons in 1954-55) is insufficient to meet home consumption. The Philippines normally produce about half the world copra supply and a large proportion of the abacá (Manila hemp) supply; there are also a leading source of sugar (1953-54: 1,090,000 metric tons, raw) and sugar products, normally the chief export. Other crops include sisal, kapok, cotton, corn, tobacco, coffee, rubber, cacao, citrus fruit and bananas. In the crop year 1954-55 963,400 metric tons of copra, 30,000 tons of tobacco and 104,500 tons of abacá were produced. Livestock on Jan. 1, 1955, included 3,109,690 carabaos, the farmers' all-purpose animal, 824,490 cattle, 233,100 horses and 5,695,000 hogs.

There are no large industrial establishments and activity is limited primarily to the processing of agricultural and forest products, such as sugar cane, coconut, tobacco, abacá and timber. Preparation of fine embroideries is an important industry. **Foreign Trade.** Statistics of trade, in millions of pesos, are as follows:

	1953	1954	1955
Exports	808	792	791
Imports	953	974	1,102

In 1955, the chief exports were copra and other coconut products (38%), sugar (27%), wood (10%) and abacá (7%). Leading customers were the U. S. (60%), Japan (15%) and the Netherlands (7%); leading suppliers, the U. S. (65%), Japan (8%) and Indonesia (3%). Leading imports were machinery and vehicles, cotton and manufactures, iron and steel and manufactures, and petroleum and products.

**Finance.** Recent data are as follows (in millions of pesos):

	1954-55	1955-56*	1956-57†
Revenue	667.4	750.2	811.2
Expenditure	665.5	750.2	810.9

\* Revised budget estimate. † Initial budget estimate.

The total public debt on June 30, 1956, including provincial and municipal obligations guaranteed or assumed by the national government, was 1,455,159,580 pesos.

**Communication.** The inter-island trade—extremely important because of the makeup of the archipelago—is served by vessels licensed for domestic, coastwise and bay and river traffic. The port of Manila has ample facilities for ocean-going vessels. According to *Lloyd's Register*, the merchant marine had 99 vessels (100 tons and over) of 149,305 gross tons on June 30, 1955.

Railway mileage (1954) totaled 740, most of which (584 mi.) was on Luzon. Highways totaled 18,500 mi. that year. Air transportation has assumed an important place in inter-island communications; domestic lines flew 4,428,540 mi. and carried 252,760 passengers in 1954.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The Philippines are an archipelago of approximately 7,083 islands lying about 500 miles off the southeast coast of Asia. The northernmost island, Y'Ami, is 85 miles from Formosa, while the southernmost, Saluag, is 30 miles east of Borneo. Only 466 of the islands have an area of more than one square mile, and only 2,441 have names. The largest islands are Luzon in the north (40,814 sq. mi.), Mindanao in the south (36,537 sq. mi.), Samar (5,124 sq. mi.), Negros (4,903 sq. mi.), and Palawan (4,550 sq. mi.).

**Minerals, Forests and Fisheries.** The Philippines possess large but relatively undeveloped mineral resources. Most important are gold, silver, iron ore, copper ore, chromite, manganese ore, lead and zinc. Petroleum formations are also known to exist. In 1954, 416,052 ounces of gold, 527,160 ounces of silver, 14,349 metric tons of copper concentrates, 451,185 tons of chromite, 1,424,898 tons of iron ore, 119,627 tons of coal, 9,393 tons of manganese and 1,827 tons of lead were mined.

The forest area is estimated at more than 43,700,000 acres (about 58 per cent of the total area), not including 3,200,000 acres covered with cogon grass, fit for grazing. About 97.5 per cent of the total forest area is government-owned. Lumber production totaled 401,857,942 bd. ft. in 1953-54; timber, 3,380,891 cu.m.

**Climate.** The temperature is warm throughout the year, averaging 80°, with only slight variations. Rainfall averages about 90-100 inches annually, with the wettest season occurring from June or July through October. Typhoons, often causing severe damage, originate in the Pacific and strike the islands from the east and southeast before curving north.

## Poland (People's Republic) (Polska Rzeczpospolita Ludowa)

Area: 120,442 square miles.

Population (est. 1955): 27,278,000.

Density per square mile: 226.5.

Chairman of State Council: Aleksander Zawadzki.

Premier: Josef Cyrankiewicz.

Principal cities (est. 1955): Warsaw, 965,000 (capital); Łódź, 670,000 (industrial center); Wrocław (Breslau), 490,000 (former German industrial center); Kraków, 430,000 (commercial center); Poznań, 370,000 (farm products).

Monetary unit: Złoty.

Language: Polish (more than 90%).

Religions: Roman Catholic, Jewish, Protestant.

**HISTORY.** Little of certainty is known about Polish history before the 11th century. Early in that century the Polish King, Boleslaus I (the Brave), ruled over Bohemia, Saxony and Moravia. Mongol invasions in 1241 and 1259 were repelled with accompanying devastation. Meanwhile, the Teutonic Knights were erecting in Prussia a state which included part of Poland and barred the latter's access to the Baltic. The Knights were defeated by Wladislaus II (1386-1434) at Tannenberg in 1410 and became Polish vassals under the Peace of Thorn (1466), by which Poland regained a Baltic shoreline.

Poland reached the peak of its power between the 14th and 16th centuries. The 16th century was marked by a constant growth of power on the part of the lesser nobility with a corresponding weakening of the Crown, which became elective in 1572. In succeeding years, Poles scored many military successes against the Russians and Turks. In 1683, King John Sobieski, a famous military leader, turned back the Turkish tide near Vienna.

These successes did not halt the process of decline which resulted from the lack of strong central authority, and Prussia, Russia and Austria were able to carry out a first partition of the country in 1772, a



second in 1792 and a third in 1795-96. For more than a century thereafter, there was no Polish state, but the Poles never ceased their efforts to regain their independence. World War I found them fighting unhappily on both sides.

The independence of Poland was formally proclaimed in Nov. 1918, and Marshal Josef Pilsudski was confirmed in office as President. In 1919, Ignace Paderewski, famous pianist and patriot, became the first Premier. Russia attacked Poland in 1920 but the Poles, under Marshal Pilsudski and aided by the French, defeated the invaders. On May 12, 1926, Marshal Pilsudski seized complete power in a *coup d'état* and ruled the country dictatorially until his death on May 12, 1935, when he was succeeded by Marshal Edward Smigly-Rydz.

Despite a 10-year nonaggression pact signed with Germany in 1934, Hitler attacked Poland on Sept. 1, 1939. Russian troops invaded from the east Sept. 17, 1939, and on Sept. 28 a German-Russian agreement was signed dividing Poland between Russia and Germany. W. Raczekiewicz formed a government-in-exile in France with Gen. Wladyslaw Sikorski as Premier; this government moved to London after France's defeat in 1940.

All of Poland was occupied by Germany after the Nazi attack on the Soviet Union in June 1941. On July 30, 1941, Poland concluded an agreement with the U.S.S.R. voiding all German-Soviet agreements effected after Sept. 1, 1939.

The legal Polish government soon fell out with the Russians, however, and in July 1944, a Communist-dominated Polish Committee of National Liberation received Soviet recognition. Moving to Lublin after that city's liberation, it proclaimed itself the Provisional Government of Poland on Dec. 31, 1944. Some former members of the Polish Government in London joined with the Lublin government to form the Polish Government of National Unity on June 28, 1945. Great Britain and the U. S. recognized this government on July 5, 1945.

On Aug. 2, 1945, in Berlin, Prime Minister Attlee, President Truman and Generalissimo Stalin established a new *de facto* western frontier for Poland, along the rivers Oder and Lausitzer Neisse, pending a final peace treaty. On Aug. 16 the Soviet Union and Poland signed a treaty delimiting the Soviet-Polish frontier. Under these agreements Poland was shifted westward. In the east it lost 69,860 square miles with 10,772,000 inhabitants; in the west it gained (subject to final peace conference approval) 38,986 square miles with a pre-war population of 8,621,000.

Democratic participation was negligible in the new government, which had adhered strictly to Soviet foreign policy and pur-

sued a program of internal socialization. The government bloc controlled by the small Communist minority won a sweeping victory in the Jan. 1947 elections, which gave little opportunity to the opposition for campaigning or voting. In Nov. 1952, Aleksander Zawadski was elected Chairman of the State Council under the new Constitution, and former President Boleslaw Bierut was elected Premier. On March 19, 1954, he yielded to Josef Cyrankiewicz, who was Premier from 1947 to 1952, and became First Secretary of the Polish Communist party. A short-lived rebellion of workers at Poznan in June 1956 was speedily quelled.

**GOVERNMENT AND DEFENSE.** The 1952 Constitution is based on that of the U.S.S.R. The supreme organ of state authority is the Sejm, composed of 425 members elected for 4 years by all citizens over 18. It elects a State Council to act when it is not in session and also elects the Council of Ministers, headed by the Premier, which is the supreme executive and administrative organ. All the Sejm's members belong to the Communist-controlled National Front.

Poland's armed forces in 1956 numbered about 450,000, including security and frontier defense forces. The navy in 1955 had 2 destroyers, 4 submarines and some mine sweepers and coastal craft.

**SOCIAL AND ECONOMIC CONDITIONS.** *Education.* In 1952-53 there were 22,977 primary schools with about 3,300,000 pupils. Secondary schools numbered 768 with 340,000 pupils. The 83 institutions of higher learning, including 8 universities, had 123,500 students in 1951-52. Education is free and compulsory up to 14.

*Agriculture.* Poland remains essentially an agricultural country: the areas now under *de facto* Polish administration in the west accounted for 25 per cent of Germany's pre-war food production. Farm lands lost to the Soviet Union were considerably larger in area than those gained from Germany, however.

Official production data are as follows (in thousands of metric tons):

	1953	1954	1955
Wheat	1,854.3	2,001.9	2,120.2
Rye	4,854.5	5,843.7	7,305.6
Oats	2,166.7	2,073.3	2,143.1
Potatoes	31,800.5	35,661.7	26,400.6
Sugar beets	6,880.7	6,950.0	7,272.8

In 1955 there were 7,912,200 cattle, 10,888,300 hogs and 4,243,200 sheep.

*Industry.* Industrial facilities, although severely damaged during World War II were not greatly affected by territorial concessions to the U.S.S.R., with the exception of the Lwów area. On the other hand important German industrial areas, es-



pecially Silesia and the city of Stettin, are located in the territories under *de facto* Polish administration. As a result, post-war Poland has a much larger industrial potential. Almost all industries have been nationalized or placed under state control, and a planned economy has been introduced as part of the government's drive to make Poland an industrial nation.

Official production figures are as follows (in thousands of metric tons):

	1953	1954	1955
Crude iron	2,358.9	2,662.8	3,112.0
Raw steel	3,603.7	3,949.2	4,426.6
Cotton yarn	103.7	108.8	114.4
Paper	355.6	366.2	402.0
Cement	3,294.3	3,403.4	3,812.9
Electric energy	13,679.4*	15,468.9*	17,745.3*

\* Millions of kw/h.

**Trade.** Foreign trade is largely conducted by government bodies under the terms of numerous trade agreements with other nations. In 1950 exports totaled \$631,000,000; imports, \$344,000,000. In 1952 the Soviet share in Polish foreign trade was 22%; that of Soviet satellites or allies, including eastern Germany and China, 35%; that of the free world, 33%.

Poland stopped publishing detailed data on foreign trade in 1949. Exports in 1949 were unofficially reported to be divided as follows: coal and coke (46%), other raw materials and semimanufactures (18%), and agricultural products (mainly bacon and ham) and consumer's goods (20%). Major imports were machinery, textiles, chemicals and mineral products.

**Finance.** The 1955 budget estimated revenue at 122,000,000,000 zlotys and expenditure at 114,900,000,000 zlotys, including 10,800,000,000 zlotys invested in the national economy.

**Communications.** The merchant marine had 147 vessels (100 tons and over) of 16,065 gross tons on June 30, 1955. The principal ports are Gdynia, with one of the largest harbors in Europe, Gdansk (Danzig) and the former German port of Stettin. There are about 61,000 miles of public highway, 4,800 miles of inland waterways and 14,350 miles of railway.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Most of Poland is a plain with no natural boundaries except the Carpathian Mountains on the south and the Oder and Neisse Rivers on the west. The central Polish plain, 300 to 450 feet above sea level and intersected by great rivers, lies south of the flat country along the Baltic shore.

The acquisition of large coal deposits in German Silesia (estimated at more than 5,000,000,000 tons), combined with much larger reserves in the southwestern region, makes Poland one of the world's leading

coal producers. The 1955 output was 94,500,000 metric tons, a third of which was produced in former German territory. Iron ore deposits are located in the Kielce and Radom districts and in German Silesia. Production in 1955 was 1,856,000 tons. Zinc and lead ores are located chiefly in Upper Silesia and the voivodships of Kielce and Kraków. Prewar Poland's principal oil-producing areas, Boryslaw-Drohobycz, are in the territory ceded to the Soviet Union; 1955 production was about 1,435,000 barrels (one-third of prewar). Among other deposits, Poland possesses copper, sulfur, chalk, clay, kaolin, marble and granite.

Forests cover 22 per cent of the land, but important wood resources are located in the territory ceded to the Soviet Union, and current production supplies less than half the annual need.

Poland's climate is dependent upon her proximity to the Baltic and to the Carpathian Mountains. Abundant rainfall (annual average: 22.8 in.) is caused by the predominating western oceanic winds. Snowfall is not heavy, but temperatures below zero are not uncommon, and the rivers are generally icebound for two and a half to three months each year.

## Portugal (Republic) (República Portuguesa)

Area: 35,358 square miles.

Population (est. 1955): 8,765,000 (practically all Portuguese).

Density per square mile: 247.9.

President: Gen. Francisco Higinio Craveiro Lopes.

Premier: António de Oliveira Salazar.

Principal cities (census 1950): Lisbon, 790,434 (capital, seaport); Oporto, 284,842 (seaport, port wine); Setúbal, 44,030 (seaport, sardines); Coimbra, 42,640 (university); Funchal (in Madeira Islands), 37,215 (Madeira wine).

Monetary unit: Escudo.

Language: Portuguese.

Religion: Roman Catholic.

**HISTORY.** Rolling and rugged Portugal is about the size of Indiana and, thanks to the days when its sailors and explorers were among the world's most venturesome, has a colonial empire 23 times the area of the homeland. A traditional ally of Britain, Portugal remained neutral in World War II but gave the Allies the right to use vital island bases in the Atlantic.

Portugal was part of Spain until it won independence in 1143 with Alfonso I as the first King. During the long reign of King John I (1385-1433), a great commercial empire was built, largely through the exploratory hobby of the King's son, Prince Henry the Navigator. Bartholomew Diaz explored Africa's west coast and reached the Cape of Good Hope in 1488. Vasco da Gama rounded the Cape and dis-

covered the water route to India in 1497-99. Portugal's empire reached its crest about 1540, when it embraced the coast of Brazil, east and west Africa, Malabar, Ceylon, Persia, Indo-China and Malaya.

In 1580-81 Spain and Portugal were joined in a personal union under Philip II of Spain. Portugal revolted in 1640 and set up a new dynasty under John IV, Duke of Braganza, but the country never recovered its position as one of Europe's major powers. In 1806, when Portugal refused to obey Napoleon's orders that all continental ports be closed to British ships, French forces invaded the country but were ousted in 1811 by British and Portuguese forces under the Duke of Wellington. The royal family had fled to Brazil in 1807 but following an uprising at home, the King, John VI, returned in 1821.

Brazil declared its independence in 1822 and John's son, Pedro became Emperor of the new state as Pedro I. In 1832, Pedro I, who had abdicated as Emperor of Brazil in 1831, returned to Europe and led an uprising with British assistance in favor of his daughter, Maria II, displacing his younger brother, Miguel I, who had been proclaimed King in 1828. The descendants of Maria's marriage with Ferdinand of Saxe-Coburg ruled Portugal until 1910, when King Manoel II was forced into exile by a republican revolt.

On June 19, 1911, the monarchy was abolished, and a republican Constitution was introduced. Portugal proclaimed its loyalty to the British alliance upon the outbreak of World War I, and Portuguese troops fought both in Africa and on the Western Front.

On May 30, 1926, a revolution led by the army deposed the President and set up a military dictatorship. General António Oscar de Fragoso Carmona became Premier and acting President Nov. 29, 1926, and was elected President on March 25, 1928. Dr. António de Oliveira Salazar, who was appointed Finance Minister in 1928, founded the organization known as the National Union in 1930 and has been Premier and dictator since 1932. His regime, while admittedly opposed to liberal or democratic principles, brought political and economic stability to Portugal.

General elections for members of the National Assembly held on Nov. 18, 1945, Nov. 13, 1949 and Nov. 8, 1953 were, except in isolated districts in 1953, boycotted by the opposition, and the National Union was continued in office. Portugal adhered to the North Atlantic Pact in April 1949.

President Carmona died April 18, 1951; Gen. Francisco Lopes was elected without opposition to succeed him July 22, 1951.

**GOVERNMENT AND DEFENSE.** Under the Constitution of 1933 Portugal is a corpo-

rate republic. The President is popularly elected for a term of 7 years; the National Assembly of 120 members for a term of 4 years. There is also a Corporative Chamber which handles economic, social and some legislative matters; its members are representatives of local autarchies and of the several branches of social activity—administrative, moral, cultural and economic. The Assembly theoretically may overrule the President's veto by two-thirds vote. The President appoints the Premier who in turn selects the Cabinet; the latter is not responsible to the National Assembly.

Military service is compulsory; the initial training period is 6 years, but not those liable for duty are called up. The navy in 1954 had 5 destroyers, 3 submarines, 8 sloops and several smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is compulsory, but in 1953 40.4% of the population (7 years and over) could not read and write. Primary schools numbered 14,176 in 1952-53, with 938,946 students; the 345 secondary schools had 54,370 pupils. There were 3 universities (Coimbra, Lisbon, Oporto) with 10,800 students.

Portugal's corporate state has a planned economy in which each producing unit regulates itself in the interest of the nation. Corporate units have been established in agriculture, industry and finance. As an example, the government controls the wine trade by means of a federation of growers and a guild of exporters.

Sixty per cent of Portugal's people are engaged in agriculture. Although wheat is the leading crop, it is insufficient to meet domestic needs, and grain must be imported. One of the world's leading wine makers, Portugal produces two famous kinds—Port in the vicinity of Oporto, and Madeira in the islands of the same name. In olive oil production, Portugal usually ranks third in the world (estimated production 1955-56: 74,000 metric tons).

Leading crops in 1955, in metric tons were wheat, 401,000; barley, 69,000; oats, 71,000. Wine production in 1955 was about 282,000,000 U. S. gallons (1950-54 average 256,000,000 gallons).

Wool production in 1955 was approximately 5,000 metric tons, clean basis.

**Trade statistics, in millions of escudos**

	1953	1954	1955
Exports	6,284	7,297	8,100
Imports	9,547	10,084	11,400

\* Preliminary.

In 1955 the principal customers were the Portuguese overseas territories (22%); Britain (16%) and the U. S. (10%); chief suppliers, the Portuguese territories (15%); Germany (15%) and Britain (14%). The

chief exports were cork (21%), fish, mainly sardines (11%) and wine (8%). Leading imports included wheat and flour, ships, industrial machinery, raw cotton and iron and steel.

On June 30, 1955, the merchant marine had 323 vessels (100 tons and over) of 563,417 gross tons. Railway mileage in 1953 was 2,236, and highway mileage was 17,885.

#### NATURAL FEATURES AND RESOURCES;

**CLIMATE.** Portugal is crossed by many small rivers, and also by three large ones which rise in Spain, flow into the Atlantic, and divide the country into three geographic areas. The Minho (Miño in Spain) River, part of the northern boundary, cuts through a mountainous area that extends south to the vicinity of the Douro (Duero) River. South of the Douro the mountains slope to the plains about the Tagus (Tejo) River. The remaining division is the southern one of Alentejo.

The Azores, stretching over a distance of 1400 miles in the Atlantic, consist of 9 islands divided into three groups, with total area of 888 square miles. The nearest continental land is Cape da Roca, Portugal, which lies 800 miles to the east. The Azores are an important station on Atlantic air routes, and both Britain and the United States established air bases there during World War II. Madeira, consisting of two inhabited islands, Madeira and Porto Santo, and two groups of uninhabited islands, lies in the Atlantic about 535 miles southwest of Lisbon. Total area of the Madeiras is 314 square miles.

Mineral resources have not been fully developed, but wolfram, coal, iron ore, copper, manganese, iron pyrites, lead, tin, and other ores are found. The coal output in 1955 was 412,800 metric tons; iron ore (metal content 50%), 168,000 tons; tin concentrates, 1,440 tons; (1954) pyrites, 583,400 tons; lead 2,000 tons; tungsten, 4,283 tons.

Portugal is one of the world's leading producers of cork; production in 1953 was 136,726 metric tons. In 1953, 39,875 metric tons of resin and 7,030 tons of turpentine were exported.

The fishing industry is a basic part of the national economy. Of special importance is the sardine industry centered at Setúbal. The total fishing catch in 1954 was 307,300 metric tons.

Portugal's climate is equable and temperate, but in the deep valleys where the mountains keep out the cool winds from the Atlantic, it is excessively hot in summer. Lisbon, Coimbra and Oporto all have mean temperatures of 60° to 61.5°. Heavy frogs are common along the coast. Rainfall is as high as 110 inches annually in the north and on the Serra da Estrella.

#### PORTUGUESE OVERSEAS TERRITORIES

	Area, sq. mi.	Population, est. 1954
<b>AFRICA</b>		
Angola	481,351	4,243,000
Cape Verde Islands	1,557	168,000
Mozambique	297,731	5,975,000
Portuguese Guinea	13,948	535,000
São Tomé and Príncipe	372	53,000
<b>ASIA</b>		
Macao	6	200,000
Portuguese India	1,538	643,000
Timor	7,332	469,000

The status of the Portuguese overseas territories is fixed by the Colonial Act of July 1930 included in the Constitution approved March 19, 1933, and revised in 1951. Each territory has a Governor or Governor General, appointed by the Council of Ministers for an initial 4-year term and responsible to the Minister of Overseas Territories at Lisbon. Each territory has financial and administrative autonomy.

#### ANGOLA (Portuguese West Africa)—Status: Overseas territory.

Capital: Loanda (pop. 1955: 189,590).

Governor General: José Agapito da Silva Carvalho.

Foreign trade (1955): exports, 2,804,665,-000 escudos (23% to the U. S.); imports, 2,687,948,000 escudos (48% from Portugal). Chief exports: coffee (48%), diamonds (13%), fish meal (7%).

Agricultural exports (1955): coffee, 60,159 metric tons; sisal, 40,716 tons; cotton, 6,266 tons; sugar, maize, palm kernels and oil, peanuts, rice.

Minerals: diamonds (1955: 740,332 carats), lignite, copper.

Forest products: beeswax, timber.

Industries: sugar, palm oil, whale oil, fish oil.

Angola stretches along the west African coast for about 1,000 miles from Belgian Congo to the Cunene River. Outside of a coastal plain varying in width from 30 to 100 miles, the area is part of the great African plateau. The Angola coast and the Congo River were explored by the Portuguese in 1482-85, and Loanda was founded in 1576. A legislative council with an elected majority was established in Angola in 1955.

Angola is primarily an agricultural country. Its varied altitude enables it to produce both tropical and temperate crops. Excellent grazing land exists in many parts of the colony. The chief ports are Loanda and Lobito. The great majority of the population are of Bantu-Negro stock, mixed in the Congo district with the pure Negro. Europeans in 1955 numbered 109,568; half-castes, 30,453.

Mean annual temperature at Loanda is 74.3°; the cool season lasts from June to



September, the wet from October to May. Rainfall in the lower altitudes exceeds 40 inches annually.

**CAPE VERDE ISLANDS**—Status: Overseas territory.

Capital: Praia (population 9,980).

Governor: Manuel Marques Abrantes Amaral.

Foreign trade (1954): exports, 426,486,-000 escudos; imports, 427,550,000 escudos. Chief exports: ships stores (90%), preserved fish.

Agricultural products: coffee, millet, castor oil, oranges, hides.

This group of 14 volcanic islands lying off the west African coast was discovered in 1456 by the Venetian captain Alvise Cadamosto, in the service of Prince Henry the Navigator. The island of São Vicente is an important fueling station on the South American route. The vast majority of the inhabitants are mulattoes (101,498 in 1950) and Negroes (42,487)—descendants of slaves brought to the islands from Africa by early settlers. Public slavery was abolished in 1854, and private slavery in 1876. Europeans in the year 1950 numbered 3,109.

Summer temperatures are high in the archipelago, ranging up to 90° near the sea. The rainy season lasts from August to October.

**MOZAMBIQUE** (Portuguese East Africa)—Status: Overseas territory.

Capital: Lourenço Marques (population 93,265).

Governor General: Gabriel Maurício Teixeira.

Foreign trade (1955): exports, 1,528,-033,000 escudos; imports, 2,586,720,000 escudos. Chief exports: cotton (28%), sugar (14%), tea, copra, cashew nuts, sisal.

Agricultural exports (1955): cotton, 32,-687 metric tons; sugar, 85,820 tons; tea, 5,540 tons; copra, 34,823 tons; cashew nuts, 49,960 tons; sisal, 26,896 tons.

Minerals: gold, coal, graphite, mica.

Forest products: mangrove bark, timber.

Mozambique, stretching for about 1,430 miles along Africa's southeast coast, was discovered by Vasco da Gama in 1498, although the Arabs had penetrated into the area as early as the 10th century A.D. It was first colonized in 1505, and by 1510 the Portuguese were masters of all the former Arab sultanates on the east African coast. The boundaries with British Central and South Africa were delimited in 1891, and with Tanganyika Territory in 1886 and 1890. By the Treaty of Versailles, following World War I, Portugal was allotted the Klunga triangle, formerly part of German East Africa. One of the four provinces—Manica and Sofala (87,454 sq. mi.)—was held by the Mozambique Company until 1942, at which time the Portuguese government refused to renew its charter.

Agriculture is the chief industry. There are many large plantations, some of which are partially mechanized. Stockraising is hampered by prevalence of the tsetse fly.

Ninety-nine per cent of the inhabitants are native Africans of the Bantu Tribes. In 1950 there were 48,213 Europeans, 12,631 Asiatics and 25,149 mulattoes. There were 1,652 miles of railway and 18,078 miles of road, mostly unimproved. The chief ports are Lourenço Marques and Beira, which also the port for Rhodesia. The principal river is the Zambezi.

The cool season lasts from April to August, and the rainy season from December to March. On the central coast the mean annual temperature is about 85°.

**PORTUGUESE GUINEA**—Status: Overseas territory.

Capital: Bissau (population 18,309).

Governor: Diogo de Melo e Alvim.

Foreign trade (1954): exports, 185,695,429 escudos; imports, 171,922,324 escudos. Chief exports: peanuts (69%), coconuts.

Agricultural products: peanuts (export 1954: 39,780 metric tons); coconuts, copra, rice, palm oil.

Forest products: timber, wax, rubber.

This area, lying on the west African coast and almost surrounded by French West Africa, was discovered in 1446 by the Portuguese Nuno Tristão and was separated from the colony of the Cape Verde Islands in 1879. It consists of a low-lying coastal region and 60 islands off the coast. The country is undeveloped economically, and most of the natives are farmers. There are no railways, but navigable rivers totaling over 1,000 miles are important trade arteries; there are also about 1,820 miles of roads. About two-fifths of the natives are Moslem; there were 2,254 Europeans in 1950. On the coast, the temperature varies between 77° in January and 85° in May. The dry season extends from December to May.

**SÃO TOMÉ AND PRÍNCIPE**—Status: Overseas territory.

Capital: São Tomé (population 7,813).

Governor: António Pires Barata.

Foreign trade (1955): exports, 161,703,231 escudos; imports, 125,221,828 escudos. Chief exports: cacao (70%), copra (11%), coconuts, coffee.

Agricultural products: cacao, coffee, coconuts, copra, palm oil.

These volcanic islands, lying in the Gulf of Guinea about 150-175 miles off the west African coast, were discovered by the Portuguese in 1471. Most of the early inhabitants were convicts and Jews from Portugal and slaves from Brazil and the mainland, but the bulk of the present inhabitants are Negro contract laborers from the mainland and Cape Verde engaged to work cacao plantations. There were 1,150 Europeans and 4,300 mulattoes in 1950.

**MACAO**—Status: Overseas territory.  
Capital: Macao (population 166,544).  
Governor: Joaquim Marques Esparteiro.  
Chief exports: fish, cement, preserves.  
Manufactures: cement, preserves, firecrackers, vegetable oils, metal products.

Macao comprises the peninsula of Macao and the two small islands of Taipa and Coloane on the south China coast, about 5 miles from Hong Kong. Established by the Portuguese in 1557, it is the oldest European outpost in the China trade, but Portugal's sovereign rights to the port were not recognized by China until 1887, and its boundaries are still not delimited. The port has been eclipsed in importance by Hong Kong, but it is still a busy distribution center, and also has an important fishing industry employing over 40,000 people. It is notorious for its opium trade and gambling houses. Most of the population is Chinese; Europeans numbered 2,719 in 1950.

**PORTUGUESE INDIA**—Status: Metropolitan province.

Capital: Panjim (Nova Gôa) (population 1,950).

Governor General: Paulo Bénard Guedes.  
Foreign trade (1955): exports, 56,086,87 rupias\* (38% to Germany); imports, 21,526,792 rupias (31% from Portugal).  
Chief exports: iron ore (73%), manganese ore (21%), cashew nuts.

Agricultural products: cashew nuts, coconuts, spices.

Minerals (exports 1955): iron ore, 1,505,14 metric tons; manganese ore, 149,172 tons.

\* 1 rupia = 5.97 escudos.

The area consists of Gôa and 3 islands in the Malabar coast of India; Damão and the territories of Dadará and Nagar-Aveli, in the Gulf of Cambay; and Diu, with the continental territories of Gocola and Ambor, on the coast of Gujarat. Gôa, captured in 1510 by the Portuguese, later became capital of the whole Portuguese empire in the east. The native population is largely Hindu.

**TIMOR**—Status: Overseas territory.

Capital: Dili (population 7,000).

Governor: Cesar Maria de Serpa Rosa.

Foreign trade (1955): exports, 38,293,000 escudos; imports, 71,006,000 escudos. Chief exports: coffee (74%), rubber (9%).

Agricultural products: coffee, copra.

Forest products: sandalwood, wax.

Portuguese Timor consists of the eastern half of the island of Timor in the Malay Archipelago, with the territory of Ambeno and two neighboring islands. It was first settled by the Portuguese early in the 16th century. In 1859 the island was divided between Portugal and the Netherlands; later boundary adjustments were made in 1904. Fishing and copra manufacture are important; trade is mostly in the hands of Chinese, Malaysians and Arabs. Europeans numbered 568 in 1950. Timor was occupied

by Dutch and Australian troops in Dec. 1941, and by the Japanese in Feb. 1942.

## Rumania (People's Republic)

(Republica Populara Româna)

Area: 91,654 square miles.

Population (census 1956)\*: 17,489,794 (1948: Rumanian, 85.7%; Magyar, 9.4%; German, 2.2%; Jews, 0.9%; others [Turkish, Ruthenian, Bulgarian, Gypsy, Ukrainian] 1.8%).

Density per square mile: 190.8.\*

Chairman of Presidium: Petru Groza.

Premier: Chivu Stoica.

Principal cities (census 1956)\*: Bucharest, 1,236,906 (capital); Cluj, 154,752 (Transylvanian industrial center); Timisoara, 142,251 (western commercial center); Stalin (Brasov), 123,882 (industrial center); Ploesti, 114,560 (oil).

Monetary unit: Leu.

Languages: Rumanian, Hungarian, German, Turkish.

Religions (est. 1947): Eastern Orthodox, 81%; Greek Catholic, 9%; Roman Catholic, 7%; others, 3%.

\* Preliminary figures.

**HISTORY.** In World War I, Rumania joined the Allies and won enough land at the peace conference to double its size. In World War II, Rumania joined the Axis and lost about half its earlier gains. Its present size is about that of Oregon. Politically, it is dominated by the Soviets.

Most of Rumania was the Roman province of Dacia from about A.D. 100 to 275. From the 6th to the 12th centuries, wave after wave of barbarian conquerors—Vlachs, Bulgars and others—passed over the area. Of the two regions which eventually became Rumania, Walachia was taken by the Turks in 1411, and Moldavia in the 16th century, but both retained semi-autonomy. After the Russo-Turkish War, they went under *de facto* Russian protection in 1774.

The Treaty of Paris following the Crimean War nominally united the two provinces in 1858, and Alexander Cuza was elected Prince of Moldavia and Walachia. In 1866 he was forced to abdicate and was succeeded by Prince Carol of Hohenzollern-Sigmaringen. The Treaty of Berlin recognized Rumania's complete independence in 1878, and in 1881 the principality was elevated to a kingdom. Rumania's spoils from the Second Balkan War in 1913 included the Black Sea province of Dobruja. The following year King Carol I was succeeded by his nephew, Ferdinand. The gains of World War I, making Rumania the largest Balkan state, included Besarabia, northern Transylvania and Bukovina. The Banat, a Hungarian area, was divided with Yugoslavia.

In 1926 Crown Prince Carol renounced his rights to the throne, and when King



Ferdinand died on July 20, 1927, Carol's son, Michael (Mihai) became King under a regency. However, Carol returned from exile in 1930, was crowned King Carol II, and gradually became a powerful political force in the country. On Feb. 10, 1938, he abolished the democratic Constitution of 1923. On June 21, 1940, the country was reorganized along Fascist lines, and the Fascist Iron Guard became the nucleus of the new totalitarian party. On June 27, the Soviet Union occupied Bessarabia and northern Bukovina. By the Axis-dictated Vienna Award of Aug. 30, 1940, two-fifths of Transylvania went to Hungary. On Sept. 4, the King dissolved Parliament and granted the new Premier, Ion Antonescu, full power, after which he abdicated and then went into exile. The first official act of his son, Michael I, was to confirm Antonescu in his status as head of the state and Premier. Rumania subsequently signed the Axis Pact on Nov. 23, 1940, and the following June joined in Germany's attack on the U.S.S.R., reoccupying Bessarabia. Following the invasion of Rumania by the Red Army in Aug. 1944, King Michael led a *coup d'état* which ousted the Antonescu government. An armistice with the U.S.S.R. was signed Sept. 12 in Moscow.

Elections held Nov. 19, 1946, resulted in a victory for the Communist-dominated government bloc. Michael abdicated on Dec. 30, 1947, and thereafter the nation was declared a "people's republic." The Communist-controlled People's Democratic Front was unopposed in elections held Nov. 30, 1952. Rumania was admitted to the U. N. in 1955.

**GOVERNMENT.** The 1952 Constitution is based on that of the U.S.S.R. The supreme organ of state authority is the Grand National Assembly of 423 members elected for 4 years by all citizens over 18. It elects a Presidium to act when it is not in session and also elects the Council of Ministers, headed by the Premier, which is the supreme executive and administrative organ.

**PEACE TREATY OF 1947.** The Paris peace treaty ratified on Sept. 15, 1947, confirmed the *de facto* cession to the Soviet Union of Bessarabia and northern Bukovina, the return to Rumania from Hungary of northern Transylvania (thus annulling the Vienna Award of 1940) and the cession of southern Dobruja to Bulgaria. In addition, Rumania was required to pay reparations in kind in the amount of \$300,000,000 (reduced to \$225,000,000 by the U.S.S.R. in 1948) to the Soviet Union over a period of eight years. She also was to make compensation in lei to the amount of two-thirds of the original value of Allied property damaged or destroyed in Rumania.

The treaty limited the strength of the

Rumanian armed forces as follows: army 125,000 men, navy 5,000 men and tonnage of 15,000, air force 8,000 men and 100 planes. The armed forces were soon reorganized and re-equipped with Soviet assistance.

Despite treaty limitations, the total Rumanian armed-forces personnel was estimated at more than 450,000, including security troops, by the end of 1954; a 15% reduction was announced in Aug. 1955. The navy in Dec. 1955 had 4 old destroyers, submarines and other smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is free and compulsory. Illiteracy was 23.1% in 1948. In 1952 there were 15,546 elementary schools with 2,100,000 pupils. Secondary students numbered 365,310 in 1951. There are five universities—at Bucharest, Jassy, Cluj (2) and Timisoara.

Rumania is predominantly agricultural with about 80 per cent of the population engaged on the soil. In wheat, rye and other grains, it is one of the richest countries of southeastern Europe. The large acreage is usually devoted to corn and wheat. Other crops are flax, hemp, fruit, vegetables, potatoes, sugar beets, sunflower seeds, tobacco and grapes. Stockraising is also important. In Dec. 1953, there were 1,080,000 horses, 4,930,000 cattle and 3,520,000 pigs.

Agrarian reform measures effected in 1945 provided for the distribution of estates over fifty hectares (123.6 acres) in lots of 12½ hectares to each peasant.

Industrialization made considerable progress under a 5-year plan covering the years 1951-55 which emphasized the iron, steel, metal, machinery and other heavy industries. The Soviet half-share in Soviet-Rumanian joint companies, which control the major industries, was sold to Rumania in 1954. Industries directly connected with agriculture, such as flour milling, distilling and brewing, are still of basic importance. Probably the most important industries are food processing, textiles, metals, chemicals, wood and paper. All but the smallest business enterprises have been completely nationalized.

Foreign trade is under complete government control. Exports in 1950 were \$239,000,000; imports, \$213,000,000. The U.S.S.R. took 58% of the exports and supplied 49% of imports; Czechoslovakia, Poland, Hungary and Bulgaria took 30% of exports and supplied 33% of imports. Principal exports are ordinarily petroleum products, cereals and cereal products, wood and wood products. Leading imports are iron and manufactures, machinery and motor vehicle parts and vegetable fibers and products.

The Danube, flowing along the southern border for more than 200 miles, is a highly important commercial artery. Transshipment



ent between seagoing vessels and river barges is made at Galati and Bralla. The principle of freedom of navigation on the Danube for all nations was recognized in the 1947 peace treaty. The principal seaport is Constanta. Railway mileage in 1949 was 7,363; highway mileage in 1945 was 3,163.

The 1954 budget provided for revenue of 9,838,000,000 lei and expenditure of 9,388,000,000 lei, including 17,000,000,000 lei invested in the national economy.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The Carpathian Mountains divide Rumania's upper half from north to south and connect near the center of the country with the Transylvanian Alps, running east and west.

North and west of these ranges lies the Transylvanian plateau, and to the south and east are the plains of Moldavia and Walachia. In its last 190 miles, the Danube River flows through Rumania only. It enters the Black Sea in northern Dobruja, just south of the border of the Soviet Union.

By far the most valuable of Rumanian minerals is oil, produced chiefly in the Ploesti region about 35 miles north of Bucharest. Production in 1954 was estimated at 10,200,000 metric tons (about 8,800,000 barrels).

Natural gas from Transylvania is the second most important mineral, coming to 3,300,000,000 cubic meters in 1950. Other important minerals are iron ore (1953: about 661,000 tons), lignite (1954: 4,100,000 tons), copper, gold and silver.

The Moldavian-Walachian region has hot summers and extreme frosts and blizzards in winter. Variations are less extreme in Transylvania and the Banat. Bucharest's average summer temperature is 72°; winter 27°. In some winters the Danube is ice-bound for as long as three months. Rainfall, heaviest in summer, averages 5-20 inches annually.

## El Salvador (Republic) (República de El Salvador)

Area: 8,260 square miles.\*  
Population (est. 1955): 2,193,000 (mestizo, 78%; Indian, 11%; white, 11%).  
Density per square mile: 265.5.  
President: José María Lemus.  
Principal cities (est. 1953): San Salvador, 180,713 (capital); Santa Ana, 56,952 (coffee); San Miguel, 28,730 (coffee, pineapples).  
Monetary unit: Colón.  
Language: Spanish.  
Religion: Roman Catholic.

\* Land area: 8,165 square miles.

**HISTORY AND GOVERNMENT.** El Salvador is the smallest, most densely populated

of Central American nations, and the only one without an Atlantic coast line.

Pedro de Alvarado, a lieutenant of Cortez, conquered El Salvador in 1525. The area was administered as part of Guatemala until the general Central American revolution against Spain in 1821. El Salvador struck out as an independent republic in 1839 after the dissolution of the Central American Union. Its story since then has been largely one of revolution and strife.

In Jan. 1931, the first free election in 20 years brought in Arturo Araujo as President. He was overthrown before the year was over. General Maximiliano Hernández Martínez, his successor, remained in power until May 1944, when a general strike forced his resignation. The next regime, also militarist-led, lasted only five months, and was succeeded March 1, 1945, by a regime headed by Salvador Castañeda Castro, who was ousted Dec. 14, 1948, by a revolutionary junta. Major Oscar Osorio, one of the junta's members, was named President in the March 1950 elections. Col. José María Lemus was elected to succeed him in the March 1956 elections.

The Constitution provides for a President, popularly elected for six years and normally ineligible to succeed himself; also, a one-house legislature of 54 members. The military forces include an army limited to 3,000, a militia, a national guard and a small air force.

**SOCIAL AND ECONOMIC CONDITIONS.** Education is free and compulsory; both public and private schools are state-controlled. In 1950, 57.7% of those 10 years of age and over could not read and write. Primary schools in 1954 numbered 2,032 with 210,125 pupils; secondary schools numbered 126 with 12,376 students. The national university had an enrollment of 1,315 students in 8 faculties.

Mestizos (mixed white and Indian) are the predominant racial group. There are no tribal Indians.

El Salvador is one of the most intensively cultivated countries in Latin America. Coffee, which accounts for 85 per cent of the total exports (1955-56 production: 1,210,000 bags of 132 lb. each) is controlled in volume by a commission of officials and planters. Cotton is second in importance. Corn, sugar cane, beans, rice, tobacco, cacao, indigo, millet and sisal fiber are other products. There is some cattle raising and a few local factories.

El Salvador's largest national enterprise, the Lempa river hydroelectric project, went into partial operation during 1953.

Exports in 1955 totaled 267,326,922 colones; imports, 230,190,922 colones. The

U. S. took 64% of the exports and supplied 57% of the imports.

The two railways have 385 miles of track. Roads (1954) included paved, 375 miles; other all-weather, 375 miles; unimproved, 1,200 miles.

**NATURAL FEATURES AND RESOURCES;** **CLIMATE.** Most of El Salvador is a fertile volcanic plateau about 2,000 feet high. There are several volcanoes, some still active, and many lovely crater lakes.

Gold, silver, coal, copper, iron, zinc, mercury and sulfur are the nation's chief minerals. Gold production in 1955 totaled 3,818 troy oz.; production of silver, 230,054 oz.

Forest resources, much smaller than in other Central American states, include dyewood, mahogany, cedar and walnut. El Salvador is a leading source of balsam.

Mountain ranges along the borders of Guatemala and Honduras give the highlands an almost temperate climate, but the lowlands are often hot and sultry. Temperatures at San Salvador range from about 59° (average daily low) in January to 85° (average daily high) in December; these are the two coolest months. The rainy season lasts from May to October.

## San Marino (Republic)

**Area:** 38 square miles.

**Population (est. 1953):** 13,500 (mostly Italian).

**Density per square mile:** 355.3.

**Executive:** two Regents selected every six months by the Grand Council.

**Principal town:** San Marino (est. pop. 2,000) (capital).

**Monetary unit:** Lira.

**Language:** Italian.

**Religion:** Roman Catholic.

San Marino, the oldest and smallest republic in the world, is one-tenth the size of New York City. It is entirely surrounded by Italy, in the Apennines near Rimini. According to tradition, San Marino was founded about A.D. 350 and had good luck for centuries in staying out of the interminable wars and feuds on the Italian peninsula. The Pope recognized its independence in 1631.

San Marino hires its police and judges from Italy. It no longer confers titles for a consideration, but it does derive much revenue from the exporting of its postage stamps, which are changed often to keep philatelists buying. Other exports are barley, wine and cattle, as well as building stone from Mount Titano.

Executive power is exercised by Regents, two of whom are appointed every six months from the popularly-elected Grand Council. There are several primary schools and a high school.

## Saudi Arabia (Kingdom)

**Area:** c. 617,760 square miles.

**Population (est. 1952):** 7,000,000.

**Density per square mile:** c. 11.3.

**King:** Sa'ud ibn Abd al Aziz al Sa'ud.

**Prime Minister:** Emir Faisal.

**Principal cities (est. 1954):** Mecca, 150,000 (joint capital, religious center); Jidda, 100,000 (chief port); Hufuf, 100,000 (commercial center); Riyadh, 80,000 (joint capital).

**Monetary unit:** Riyal.

**Language:** Arabic.

**Religion:** Mohammedanism.

The kingdom of Saudi Arabia, which occupies most of the Arabian peninsula, almost entirely the creation of King Ibn Sa'ud (1882-1953). Its earlier history that of Arabia. Descendant of earlier Wahabi rulers, Ibn Sa'ud seized the emirate of Riyadh in 1901, at the age of 20, and soon set himself up as the leader of the Arab nationalist movement. By 1914 he had reconquered all of Nejd and Haifa. Remaining neutral during World War I, he resumed his drive after the war and through a series of local military campaigns was able to proclaim himself King of Hejaz and Nejd and dependencies in 1927. The united kingdom of Saudi Arabia was proclaimed in 1932. Saudi Arabia remained neutral until nearly the end of World War II but was one of the original members of the U. N. and joined the Arab League in 1945. King Ibn Sa'ud died Nov. 9, 1953, and was succeeded by Sa'ud (born 1902), the eldest of his many sons.

Saudi Arabia is a nearly absolute monarchy. A Council of Ministers headed by the Prime Minister was formed in 1953. Hejaz and Nejd are under separate administrations. Tribal organizations are influential. There is a small army.

The majority of the inhabitants are Bedouin—nomads following their flocks over the desert. The population is predominantly Sunni Moslem, and the religious law of Islam is the common law of the land. Mecca and Medina are the leading religious centers of Islam and the annual influx of pilgrims to those cities is the most important commercial activity outside the oil industry.

Saudi Arabia's desert climate restricts agriculture to the highlands of Asir and scattered oases. Dates are the staple crop, grain, fruits and vegetables are also grown. Camels, sheep and goats are raised and some animal products, such as hides, wool and ghee (clarified butter), are exported. Local industries include tanning, weaving and pottery making.

Most transportation continues to be by sea and by camel caravan, although roads and motor tracks now connect the major centers. A railroad from Damman to Riyadh (345 mi.), completed in 1951, is being con-

ended across the peninsula to Medina and Jidda.

The kingdom's budget for the fiscal year 1954-55 estimated revenue at U. S. \$305,-10,000 and expenditure at \$361,330,000; the deficit was to be met from the general reserve fund. Direct payments from oil concessions in the form of royalties and income taxes were estimated at \$257,700,-00 in 1954-55.

Oil, discovered in 1936 in the province of Al Hasa along the Persian Gulf, is produced by the U. S.-owned Arabian-American Oil Co. (Aramco). The main production centers are Dharan, Abqaiq, Qatif and Dhahran. Production has skyrocketed since World War II. The company's expenditures and payroll are important invisible exports and oil revenues have greatly strengthened the financial position of the kingdom, which receives one-half the company's profits. The oilfields are connected by pipeline with the Mediterranean port of Sidon, Lebanon. In 1955 production totaled 352,-39,912 barrels; the crude run at the Ras Tanura refinery was 74,171,745 barrels.

**Siam. See Thailand**

## Spain (Nominal Monarchy)

(España)

Area: 194,945 square miles.  
Population (est. Dec. 31, 1955): 29,089,-12 (Spanish, Basque, Catalan).  
Density per square mile: 149.2.  
Chief of State: Francisco Franco y Bahamonde.  
Principal cities (est. Dec. 31, 1955): Madrid, 1,792,961 (capital); Barcelona, 393,022 (chief port, textiles); Valencia, 311,005 (silk, oranges); Seville, 413,718 (vines, iron ore); Málaga, 297,526 (seaport); Saragossa, 278,101 (rail center).  
Monetary unit: Peseta.  
Languages: Spanish, Basque, Catalan.  
Religion: Roman Catholic.

**HISTORY.** Spain, twice the size of Oregon, has once one of the world's great powers. From 201 B.C. to A.D. 406, it was part of the Roman Empire. Then the Goths and the Vandals formed a powerful kingdom, which was partially conquered in the 8th century by the Moors from Africa. The last Moorish stronghold, the kingdom of Granada, fell to the forces of King Ferdinand and Queen Isabella, who were trying to unify Spain, in 1492. In the same year, the Spanish-financed explorer Christopher Columbus was discovering the new world for the Spanish Crown.

Charles V (1516-55) became King of Spain and also Holy Roman Emperor. Under his son, Philip II, Spain reached the peak of its power, but the beginning of decline set in with Britain's defeat of the "Invincible" Armada in 1588.

The line of Spanish Hapsburgs ended in 1700, and the War of the Spanish Succession followed. By the Treaty of Utrecht (1713) Spain was forced to accept a Bourbon King, the Duke of Anjou, and lost Gibraltar and all holdings in the Netherlands and southern Italy. Then, while the Spaniards were resisting Napoleon's efforts to establish a Bonaparte line in Spain, most of their colonies in America revolted and became independent. The loss of Cuba, Puerto Rico and the Philippines in the Spanish-American War of 1898 left Spain with only a few scattered possessions in Africa. Neutrality was maintained during World War I.

From 1923 to 1930, Spain was a military dictatorship under General Miguel Primo de Rivera. A wave of republicanism in 1931 forced the abdication of King Alfonso XIII, and a new Constitution was drawn declaring Spain to be a workers' republic. Several revolts, strikes and shifts of government kept Spain in political chaos, and on July 18, 1936, the army revolt led by General Francisco Franco burst into civil war. While Hitler and Mussolini helped Franco, Russia helped the Loyalist side. The last Loyalist forces surrendered on March 29, 1939. Spain became a dictatorship under Franco and signed the anti-Comintern pact in 1939.

While Franco shied away from the risk of becoming a belligerent in World War II, he was pro-Axis in sympathy, helped the Axis with supplies, information and services to German U-boats, and even sent the Spanish Blue Division to help fight the Russians.

On Sept. 26, 1953, the U. S. and Spain signed three agreements providing for the use and development by U. S. forces of certain Spanish air and naval bases in return for U. S. military and economic aid to Spain.

**GOVERNMENT.** Franco is head of the state, national chief of the Falange party, Prime Minister and *Caudillo* (leader) of the empire. Practically, the country is ruled by the Cabinet (appointed by Franco), the National Council of the Falange party and, to a lesser extent, the Cortés (parliament). The principal function of the Cortés is the planning and formulation of laws without prejudice to Franco's veto power. Cabinet ministers, party officials, civil governors, university heads, and the presidents of learned bodies become members of the Cortés ex-officio. There is no provision for the introduction of legislation by any of the members.

In a referendum held July 6, 1947, the Spanish people approved a Franco-drafted succession law declaring Spain a monarchy again. Franco, however, is to continue as Chief of State and upon his death or incapacity the government and a Council of



the Realm constituted by the law are to nominate as King "that person of royal blood who is most qualified by right," subject to the approval of the Cortés. The law reserves to Franco the right to nominate his own successor, subject also to the Cortés approval by two-thirds vote.

**DEFENSE.** Franco is commander in chief of the army, navy and air force, each administered by a cabinet minister responsible to him. Military service is compulsory for two years. The standing army is estimated at 425,000 men. The navy in Dec. 1955 had 6 cruisers, 18 destroyers, 6 submarines, 18 frigates and escort vessels and many smaller vessels. Several destroyers and smaller vessels were under construction.

#### **SOCIAL AND ECONOMIC CONDITIONS.**

**Education.** Primary education is compulsory and free; religious instruction is permitted. In 1950, 14.24% of those 10 years of age and over could not read and write. In 1951-52 there were 59,428 public primary schools with 4,208,651 pupils, 119 secondary schools (1952) with 247,113 pupils, 106 normal schools (1952) with 25,421 students and 12 universities (1953) with 58,143 students.

**Agriculture.** Spain is predominantly agricultural, although there are extensive non-arable areas. The principal land uses, apart from forest, pasture and forage crops, are the production of grain, potatoes, pulse, sugar beets, oranges, grapes and olives. Since the civil war Spain has not recovered balance in production and consumption of foodstuffs. Normally, Spain produces exportable quantities of oranges, lemons, almonds, filberts, raisins and other subtropical commodities. Wine production in 1955 was about 444,600,000 U. S. gallons (1950-54 average: 476,500,000 gallons); olive oil production was 264,000 metric tons.

**Livestock,** also important, included in 1950, 4,200,000 cattle, 16,000,000 sheep and (1951) 4,222,000 goats and 2,670,000 hogs. Wool production in 1955 was 26,000 metric tons, clean basis.

#### **PRINCIPAL CROPS** (thousands of metric tons)

	1953	1954	1955*
Wheat	3,041	4,541	3,926
Barley	1,492	2,135	1,718
Rye	406	487	493
Oats	434	542	506
Maize	707	691	619

\* Provisional.

**TRADE.** Statistics of foreign trade are as follows, in millions of U. S. dollars:

	1953	1954	1955
Exports	482	464	446
Imports	596	614	619

Leading customers in 1954 included Britain (12%), Germany (11%), the U. S. (10%) and France (7%); leading suppliers the U. S. (18%), Germany (11%), Britain (10%) and France (9%). Leading exports in 1955 were oranges (15%), iron ore (8%) and wine (5%). The principal imports were raw cotton, chemical products (especially fertilizer), petroleum and vehicles. **Industry.** The textile industry, concentrated in Catalonia and normally employing over 300,000 workers, leads all others. The paper and chemical industries are also important. Pig iron production in 1955 was 1,170,354 metric tons; steel production, 1,213,253 tons. On Sept. 30, 1955, 63 vessels of 158,009 gross tons were under construction.

**Communications.** The merchant fleet, which suffered severely during the civil war and World War II, comprised 1,213 vessels (100 tons and over) of 1,383,354 gross tons on June 30, 1955, according to *Lloyd's Register*. The highway system is about 80,000 miles and the railway system about 11,200.

**Finance.** Recent data (budget estimates) are as follows, in millions of pesetas:

	1952-53*	1954-55*	1956*
Revenue	22,208	26,074	33,434
Expenditure	22,477	26,340	35,434

\* Data are for each year in indicated biennial budgetary period.

The public debt on Dec. 31, 1955, was 97,963,200,000 pesetas, including treasury bonds and guaranteed obligations.

#### **NATURAL FEATURES AND RESOURCES.**

**CLIMATE.** Spain, less than ten miles from Africa at the closest point, and separated from France by the Pyrenees, is generally a broad plateau sloping to south and east and crossed by a series of mountain ranges and river valleys. Most of the coast line is steep and rocky.

**Minerals.** Spain's mineral wealth, second to agriculture in the national economy, yields millions of tons of ore. Following are production figures for 1955, in metric tons: coal and lignite, 14,293,000; iron ore (metal content 50%), 3,888,000; potash ore, 1,282,106; lead ore, 63,400; zinc ore, 164,839; mercury (1953), 1,400. Spain also produces copper, gold, molybdenite, sulfur, tungsten, phosphates, silver and, reportedly, uranium.

**Forests and Fisheries.** Spanish forests yield lumber, pine resins, cork and esparto. Some 100,000 persons work in the fishing, canning and related industries. The 1955 catch principally cod, tunny and sardines, valued at 611,973 metric tons, valued at 3,616,091,000 pesetas.

**Climate.** Most of Spain's weather is extreme. Madrid, for example, reaches a high of 110° and a low of 10°. In the south the protection of the Sierra Nevadas makes

climate subtropical. The northeast, with climate much like that of the British Isles, is the only region with normal rainfall.

**OUTLYING ISLANDS.** Off Spain's east coast in the Mediterranean are the Balearic Islands, which total 1,936 square miles. The largest is Majorca (1,405 sq. mi.). Sixty miles west of Africa are the Canary Islands (2,804 sq. mi.).

#### SPANISH COLONIAL POSSESSIONS

Country	Area, sq. mi.	Census, 1950
Morocco		
Ifni	579	38,295
Ceuta, Melilla, Alhucemas, Chafarinas and Peñon de Velez	82	141,302
Spanish Sahara		
Rio de Oro	71,043	1,304
Saguia el Hamra	31,660	6,445
Spanish Guinea	10,831	198,663

### Sudan, The (Republic)

Area: 967,500 square miles.  
Population (est. 1955): 8,764,000.  
Density per square mile: 9.1.  
Chief executive: five-member Council of State.  
Prime minister: Abdullah Khalil.  
Principal cities (est. 1953): Omdurman, 5,000 (commercial center); Khartoum, 673 (capital); El Obeid, 70,100 (gum arabic); Wad Medani, 57,300 (cotton, livestock); Port Sudan, 47,500 (chief port).  
Monetary unit: Sudanese pound.  
Languages: English, Arabic, Nilotic and Negro tribal dialects.  
Religions: Mohammedan (Sunni), Pagan, Christian.

**HISTORY.** The early history of the Sudan known as the Anglo-Egyptian Sudan between 1898 and 1955) is connected with that of Nubia, where a powerful local kingdom was formed in Roman times with its capital at Dongola. After conversion to Christianity in the 6th century A.D., joined with Ethiopia and resisted Mohammedanization until the 14th century. Thereafter the area was broken up into many small states until 1820-22 when it was conquered by Mohammed Ali, Pasha of Egypt. Egyptian forces were evacuated during the Mahdist revolt (1881-98), but the Sudan was reconquered by the Anglo-Egyptian expeditions of 1896-98 and in 1919 became an Anglo-Egyptian condominium, which was reaffirmed by the Anglo-Egyptian treaty of 1936.

Egypt and Britain agreed in Feb. 1953 to grant self-government to the Sudan under an appointed Governor General. Under the self-government statute of March 31, 1953, an all-Sudanese Parliament was elected in Nov.-Dec. 1953 and an all-Sudanese government was formed,

headed by Ismail el-Azhari as Prime Minister. Under the agreement the Sudanese people were to determine their political status at the end of a 3-year period following the elections, but in Dec. 1955 the Parliament declared the independence of the Sudan, which, with the approval of Britain and Egypt, was proclaimed on Jan. 1, 1956. El-Azhari was replaced as Prime Minister by Abdullah Khalil on July 5 after losing the confidence of the Parliament.

**GOVERNMENT.** Pending the election of a Constituent Assembly and the adoption of a definitive Constitution, the powers of chief of state are exercised by a five-member Council of State. The government is administered by the Prime Minister and his Cabinet. Legislative power is vested in a bicameral Parliament composed of a Senate of 50 members and a House of Representatives of 97 elected members.

**SOCIAL AND ECONOMIC CONDITIONS.** The northern part of the country is peopled by Arabic-speaking Moslems, while in the backward south negroid pagan tribes predominate.

Long-staple cotton, the chief export crop, is grown under irrigation in the Kassala and Tokar areas of the north and in narrow strips along the main Nile. Production was 86,880 metric tons in 1954-55. Durra, peanuts, corn and oilseeds are grown elsewhere. Livestock raising is the occupation of the majority of the population; in 1952 there were 2,000,000 camels, 5,500,000 cattle and 6,000,000 sheep.

Recent foreign trade data are as follows, in millions of Egyptian pounds:

	1953	1954	1955
Exports	44.4	40.5	51.3
Imports	50.8	48.5	48.8

Leading exports in 1955 were cotton (52%), gum arabic (8%), cottonseed (5%) and peanuts (5%). Leading customers were Britain (27%), India (14%) and Egypt (9%); leading suppliers, Britain (30%), Egypt (11%) and India (10%).

There are two trunk railways, one connecting Sudan with Egypt and the other affording access to the chief port, Port Sudan, on the Red Sea. The Nile system is the principal transportation artery.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** About one-fourth the size of Europe, the Sudan extends from north to south about 1,200 miles and west to east about 1,000 miles. The northern region is a continuation of the Libyan Desert. The southern region is fertile, abundantly watered and, in places, heavily forested. It is traversed from north to south by the Nile, all of whose great tributaries are partly or entirely within its borders. The

highest elevation is a mountain range parallel to the Red Sea, with heights of 4,000 to over 7,000 feet.

Salt is produced at Port Sudan, and gold deposits are worked at Gebeit, near the Red Sea. Most of the world's gum arabic comes from the semiarid Kordofan area of the west (production 1955: 41,877 metric tons). The southern forests are rich in fibers and tannins.

The whole country lies within the tropics and has an exceedingly hot climate—greatest in the central area and least in the desert zone, where the temperature range is large. At Khartoum the mean annual temperature is 80° and rainfall 5 inches.

## Sweden (Kingdom)

(Sverige)

Area: 173,564 square miles.

Population (est. Dec. 31, 1955): 7,290,112 (practically all Swedish).

Density per square mile: 42.0.

Sovereign: King Gustavus VI Adolphus.

Prime Minister: Tage Friklöf Erlander.

Principal cities (est. Dec. 31, 1955): Stockholm, 785,945 (capital); Göteborg, 380,442 (chief port, shipbuilding); Malmö, 209,473 (seaport); Norrköping, 88,762 (textiles); Helsingborg, 74,380 (seaport).

Monetary unit: Krona.

Language: Swedish.

Religions: Swedish Lutheran, 99%; others, 1%.

**HISTORY.** Although ancestors of today's Swedes lived in the area as long as 5,000 years ago, little is known of Sweden before the 10th century. About 1000, King Olaf Skötkonung had united Sweden into a strong nation and established Christianity. In 1397 Sweden was united with Norway and Denmark under the Union of Kalmar. After the murder of several prominent Swedes by Christian II of Denmark in 1520, Sweden revolted under the leadership of Gustavus Vasa. Gustavus, elected King in 1523, founded the modern Swedish state and was the first European monarch to break relations with the Pope.

By the Treaty of Westphalia (1648) which concluded the Thirty Years' War (during which Gustavus Adolphus scored a number of brilliant military successes), Sweden acquired important German areas, including large portions of Pomerania. In 1700, Poland, Denmark and Russia united against Sweden. When peace was finally concluded in 1721, Sweden gave up Livonia, Estonia, Ingria and parts of Finland. Sweden participated in the coalition against Napoleon (1805-07) but in 1809 Finland was lost to Russia. Following the ouster of King Gustavus IV in 1809, a constitutional law still in effect was adopted, after which Charles XIII, uncle

of Gustavus IV, was elected King. His son, Charles XIII was childless, one of Napoleon's marshals, Jean Bernadotte, was elected Crown Prince and took over effective control of the government, succeeding to the throne in 1818 as Charles XIV. By the Treaty of Kiel (1814), Sweden acquired Norway from Denmark in return for Pomerania. The union with Norway lasted until 1905, at which time it was peacefully dissolved.

Neutrality was maintained through both World Wars. Sweden did not join the North Atlantic Pact in 1949.

**SOVEREIGN.** Gustavus VI Adolphus, born Nov. 11, 1882, married (1) 1905, Princess Margaret Victoria (1882-1920); (2) 1920, Princess Louise Mountbatten (born 1888). To his first marriage was born Prince Gustavus Adolphus (born Apr. 22, 1906, killed in air crash Jan. 26, 1947), who was married in 1932 to Sibylla, Princess of Saxe-Coburg-Gotha; their offspring include a son, Olof Gustavus, the heir apparent, born Apr. 30, 1946, and four daughters. Gustavus VI became King Oct. 30, 1950, on the death of his father, Gustavus V, who had reigned since 1907.

**GOVERNMENT AND DEFENSE.** Executive and judicial authority is vested in the King alone, but his resolutions must be taken in the presence of the Council of State (cabinet), headed by the Prime Minister; the Council is appointed by the King but is responsible collectively to the Riksdag (parliament).

The Riksdag has a First Chamber of 150 members elected indirectly by provincial, and in the large cities by municipal, councils for eight years, one eighth being renewed each year. The Second Chamber of 230 members is directly elected by popular vote for four years. There is universal suffrage for men and women over 21. The King has the right to initiate legislation and has an absolute veto over all bills except those relating to taxation.

Standings in the Second Chamber (elections of Sept. 21, 1952): Social Democrats 110, Liberal 58, Conservative 31, Agrarians 26, Communist 5.

**Defense.** Military service is compulsory from the ages of 18 to 47; the initial training period is 10 months. The King is commander in chief of all the armed forces. The army, numbering about 40,000, with a trained reserve of 600,000, is well-equipped with the latest type weapons, many of them Swedish. The navy in June 1956 had 3 cruisers, 2 coast defense ships, 12 destroyers, 15 escort vessels, 48 minelayers, torpedo boats, 21 submarines, 2 minelayers and numerous smaller craft. Naval personnel numbers about 10,000 in addition to coast artillery, under naval jurisdiction. The air force has 600 planes.



## SOCIAL AND ECONOMIC CONDITIONS.

**Education.** Public elementary education has been free and compulsory since 1842. Illiteracy is practically unknown. In 1955 there were 820,000 pupils in regular elementary schools as well as 177,000 pupils in regular secondary schools. The three universities—Uppsala, Lund and Göteborg—and two other schools of university grade had 15,929 students in 1955. The state also provides a large number of special vocational and continuation schools. The national church is the Swedish Lutheran Church, of which the King is supreme administrator.

**Agriculture.** Milk, butter, meat, grain, potatoes and sugar beets are products of the broad fertile plains of the south; the north is limited to cattle raising and dairy farming. Recent production data are as follows, in thousands of metric tons:

	1953	1954	1955
Wheat	988	1,020	716
Rye	297	301	170
Barley	468	360	408
Oats	945	861	597
Mixed grain	738	656	528
Sugar beets	1,997	1,848	1,663
Potatoes	1,727	1,429	1,285

The 1955 livestock estimates showed 312,000 horses, 2,575,000 cattle, 177,000 sheep and 1,568,000 hogs. Butter production in 1955 was 84,200 metric tons; cheese, 54,100 tons; milk, 4,153,000 tons.

**Industry.** The highly specialized machine industry produces separators, motors, electrical machines and apparatus, agricultural machinery, ball bearings, telephone equipment and harbor works. Pig iron production in 1955 totaled 1,175,000 metric tons; raw steel, 2,126,000 tons.

There are also large woolen, glass and porcelain industries. Shipyards build for both Swedish and foreign fleets. In 1955, 95 vessels of 525,814 gross tons were launched. The timber and woodworking industries are extensive.

**Trade.** Statistics of foreign trade are as follows, in millions of kronor:

	1953	1954	1955
Exports	7,657	8,196	8,933
Imports	8,161	9,192	10,305

Leading exports in 1955 were wood pulp (17%), timber (16%), machinery and apparatus (11%) and iron ore (9%). Leading customers were Britain (20%), western Germany (13%), Norway (10%) and the Netherlands (6%). Leading suppliers were western Germany (22%), Britain (13%), the U. S. (10%) and Norway (3%). The principal imports included machinery, petroleum and products, textiles and clothing and automobiles.

**Communications.** On June 30, 1955, the merchant marine comprised 1,217 ships

(100 tons and over) of 2,807,166 gross tons, largely efficient motor vessels. The highly developed railway network totaled 10,200 miles in 1955, and there were about 56,920 miles of highway, mostly improved. By means of ferry steamers, Swedish state railways are connected directly with both Germany and Denmark.

**Finance.** Recent data on current account are as follows, in millions of kronor:

	1954-55	1955-56	1956-57*
Revenue	8,907	9,509	11,009
Expenditure	8,617	9,576	10,603

\* Budget estimate.

The public debt was 16,081,000,000 kr. on Dec. 31, 1955.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Sweden, with extreme length of about 990 miles and breadth of 310 miles, slopes eastward and southward from its peak elevation in the Kjölen mountains along the Norwegian border. In the north are mountains and many lakes. To the south and east are central lowlands, and south of them are fertile areas of forest, valley and plain. Along Sweden's rocky coast, chopped up extensively by bays and inlets, are many islands, the largest of which are Gotland (1,225 sq. mi.) and Öland (520 sq. mi.). The country is landlocked to the north.

**Minerals.** Sweden's iron ore deposits (metal content 60%) are among the world's richest. Those in central Sweden produce principally for domestic use, while the ones in Lapland to the north are worked largely for export, with much of the output being shipped through the Norwegian port of Narvik. Production in 1955 was 17,131,000 metric tons. Gold production was 121,360 troy oz. Other major minerals are copper (31,867 tons), lead (21,382 tons), arsenic ore (52,300 tons), manganese ore (15,383 tons) and silver (2,322,500 oz.). Coal production (282,000 tons in 1955) is comparatively small; imports of several million tons a year are therefore necessary. Deposits of uranium have been reported in Sweden.

**Forests and Fisheries.** About 60 per cent of Sweden is forested, mostly conifers, and there are vast forest products industries in the north. Sweden supplies a large percentage of the world's mechanical and chemical pulp. In 1954, 3,650,000 metric tons of wood pulp, 343,000 tons of newsprint, 891,000 tons of other paper and 190,000 tons of cardboard were produced.

The average annual catch of fish is about 140,000 tons, half of it in small Baltic herring. Cod, mackerel and sprat also are taken in the Baltic, and the inland lakes and rivers are well stocked with salmon, trout and perch. The catch in 1955 (sea and coast fisheries) was 200,000 metric tons valued at 128,000,000 kr.

**Climate.** Sweden's climate is diversified. The warmest month is usually July, with a mean temperature of 62° in Stockholm. February is the coldest month, with a mean average below 32° for all Sweden (25.7° at Stockholm). Average annual rainfall in the north is 16.5 inches; in the south, 22.5 inches.

## Switzerland (Republic)

(Schweiz-Suisse-Svizzera)

Area: 15,941 square miles.

Population (est. Dec. 1955): 5,004,000 (Swiss, 91.2%; German, 3.6%; Italian, 3.1%; French, .9%; others, 1.2%—figures by place of birth).

Density per square mile: 313.9.

President (1956): Markus Feldmann.\*

Principal cities (est. Dec. 1955): Zürich, 418,600 (textiles, banking); Basel, 195,000 (rail center; Rhine port); Geneva, 160,400 (intellectual center); Bern, 156,600 (federal capital).

Monetary unit: Swiss franc.

Languages: German, 71.9%; French, 20.4%; Italian, 6.0%; Romansch, 1.1%; others, .6%.

Religions: Protestant, 57%; Roman Catholic, 41%; Jewish, .4%; others, 1.6%.

\* The vice president ordinarily becomes president the next year. Vice-president in 1956: Hans Streuli.

**HISTORY.** Swiss history is principally the story of the federation of various fiefs of the Holy Roman Empire into a single union for common defense. The process began in 1291, with the cantons of Uri, Schwyz and Nidwalden as the nucleus. Over the next 300 years, ten new cantons entered the federation, which nominally remained part of the Holy Roman Empire until the Treaty of Westphalia gave it independence in 1648.

The French revolutionary army succeeded in occupying Switzerland in 1798 and organized it as the Helvetic Republic, but Napoleon restored the federation in 1803. The Congress of Vienna (1815) declared Switzerland an independent, neutral state in perpetuity, and fixed the nation's borders as they exist today. Out of the brief Swiss civil war of 1847 came the democratic Constitution of 1848, which was influenced by the Constitution of the United States.

Switzerland maintained strict neutrality in World Wars I and II, during which its diplomatic delegations represented the interests of many of the belligerents.

**GOVERNMENT AND DEFENSE.** Since the adoption in 1874 of their present Constitution, the Swiss have had a federation of 22 sovereign cantons. Each canton has its own legislature, executive and judiciary departments, with the right of veto over federal legislation through referendum.

The Federal Assembly has two houses—a Council of States of 44 members, two

from each canton, and a National Council of 196 members elected for four-year terms. The seven members of the Cabinet (Federal Council) are elected for four years by the Federal Assembly, which also elects the Swiss President from among its own members for a period of one year. The federal government is supreme in matters of war, peace and treaties, and regulates the army, railroads, postal service, mints and national bank note issues.

In peacetime, the highest Swiss army officer is a colonel. In wartime a commander in chief is named with rank of general. Since the army is a national militia, it maintains no standing forces, but military service is compulsory from the ages of 18 to 60, with an initial training period of about three months and an 11-day refresher course once a year. The force of men trained and physically fit is about 650,000. The air force has about 5,000 personnel and 400 planes.

### SOCIAL AND ECONOMIC CONDITIONS

Primary education is compulsory, free and locally controlled. In 1951-52 primary schools had 476,331 pupils and secondary schools had 80,207. There are seven universities, with an enrollment of 12,444 students in 1953-54.

Religious freedom is guaranteed under the constitution. German, Italian and French were recognized as national languages in 1874, and Romansch, a dialect of the Alpine regions, was also made a national language in 1937.

With nearly a fourth of its land unproductive, and with half of it in pasture or forest area, Switzerland is dependent on imports for food supply. Wheat, potatoes, fruits, oats, barley, rye, sugar beets and grapes are grown, but stockraising and dairy farming account for three-fourths of the agricultural production. In 1955 there were 1,644,974 cattle, 1,158,688 hogs, 200,688 sheep, 112,463 goats and 116,740 horses. Production of cheese in 1954 was 50,766 metric tons; of butter, 28,320 metric tons.

Manufacturing is the principal economic activity, with more than 40 per cent of the population being sustained by manufactures or mechanical pursuits. Industry is conducted largely in small plants using highly skilled workers. Almost all the raw materials are imported, and products consist almost exclusively of high grade, expensive commodities. In 1955 there were 11,989 factories with 587,998 workers.

Manufactures include chemical products, machines, watches, textiles, aluminum precision instruments, lumber, shoes and fine handmade embroidery. Chief agricultural industries are the manufacture of fine cheeses and condensed milk. With its many scenic attractions, Switzerland draws the heaviest and most profitable tourist trade in Europe.



Switzerland is dependent on foreign trade for its prosperity. Trade statistics are as follows, in millions of Swiss francs:

	1953	1954	1955
Exports	5,165	5,272	5,622
Imports	5,071	5,592	6,401

In 1955 the leading customers were western Germany (13%), the U. S. (10%), Italy (8%), France (7%) and Britain (5%). Leading suppliers were western Germany (26%), the U. S. (13%), France (12%), Italy (10%) and Britain (5%). Leading exports were machinery (20%), clocks and watches (18%), chemicals and drugs (15%) and textiles and clothing (13%).

The Rhine, navigable from Basel to the North Sea, is the principal inland waterway. Railways built over rugged terrain, entailing construction of many bridges and tunnels, total about 3,350 miles, mostly electrified. Road mileage is about 10,500.

Financial data in millions of Swiss fr.:

	1954	1955	1956*
Revenue	2,320.2	2,245.2	2,432.4
Expenditure	1,959.2	1,948.7	1,968.9

\* Budget estimate.

The debt of the Confederation alone (excluding the railway debt) was 7,602,000,-000 fr. on Dec. 31, 1955.

**NATURAL FEATURES; CLIMATE.** Most of Switzerland comprises a mountainous plateau bordered by the great bulk of the Alps on the south and by the Jura Mountains on the northwest. Its greatest length is 226 miles, greatest width, 137 miles. About a fourth of the total area of Switzerland is covered by scenic mountains and glaciers.

The country's largest lakes, Geneva, Constance (Boden See) and Maggiore, straddle the French, German-Austrian and Italian borders, respectively.

The climate is temperate and varies greatly with altitude. The coldest month (January), for example, averages 31.8° at Basel, which is 909 feet in elevation, and 16.2° at Säntis, with altitude of 8,202 feet. July is the warmest month, with a mean of 66.4° in Basel and 41° at Säntis.

## Syria (Republic)

(Al-Jamhourya as-Souriya)

Area: 70,014 square miles.  
Population (est. Dec. 31, 1955): 3,905,898  
(Arab, Armenian, Kurdish, Turkish, French).

Density per square mile: 55.8.  
President: Shukri al-Kuwatly.  
Premier: Said el-Ghazzli.  
Principal cities (est. 1955): Damascus, 1,08,774 (capital); Aleppo, 407,613 (northern trading center); (est. 1952) Homs, 261,904 (farming, silk); Hama, 155,671 (Bedouin trading center).  
Monetary unit: Syrian pound (£S).

Languages: Arabic, Aramaic, French.

Religions (est. 1949): Moslem, 85%; Christian, 13.9%; Jewish, 1%; others, .1%.

**HISTORY.** Ancient Syria was conquered by Egypt about 1500 B.C., and after that by Hebrews, Phoenicians, Assyrians, Chaldeans, Persians and Greeks. From 64 B.C. until the Arab conquest in A.D. 636, it was part of the Roman Empire except during brief periods. The Arabs made it a trade center for their whole empire, but it suffered severely from the Mongol invasion in 1260 and fell to the Ottoman Turks in 1516. Syria remained a Turkish province until World War I.

A secret Anglo-French pact of 1916 put Syria in the French zone of influence. The League of Nations gave France a mandate over Syria after World War I, but the French were forced to put down several nationalist uprisings. In 1930, France recognized Syria as an independent republic, but still subject to the mandate. After nationalist demonstrations in 1939, the French High Commissioner suspended the Syrian Constitution. In 1941, British and Free French forces invaded Syria to eliminate Vichy control. During the rest of World War II, Syria was an Allied base. Again in 1945, nationalist demonstrations broke into actual fighting, and British troops had to restore order. Syrian forces met a series of reverses while participating in the Arab invasion of Palestine in 1948. After Mar. 30, 1949, when the government was overthrown by Husni Zayim, there were several army *coups d'état*. That of Nov. 29, 1951, was engineered by Col. Adib Shishakly. Elected President in July 1953, Shishakly was ousted on Feb. 25, 1954, by the army, which named Hachem Bey el-Attassi President. On Aug. 18, 1955, Shukri al-Kuwatly was elected President.

**GOVERNMENT AND DEFENSE.** Under the 1950 Constitution, restored in 1954, legislative power is vested in a unicameral Parliament. Executive power is exercised by the President through the Premier and his Cabinet.

The strength of the army is about 45,000. There is a small air force and a navy with a few coastal vessels.

**SOCIAL AND ECONOMIC CONDITIONS.** Primary education is compulsory. In 1954 Syria had 2,595 primary and 212 secondary schools, with total enrollment (1952) of 360,000. There is a university at Damascus.

Agriculture and animal breeding are the main industries. Only half the land is arable, and only a third is actually cultivated. Most crops require irrigation. In 1954-55 Syria grew 800,000 metric tons of wheat and 561,000 tons of barley. Other leading crops include sorghum, olives, cotton, grapes, lentils and tobacco. Stock-raising is important among nomads and semi-nomads.



Exports in 1955 totaled £\$473,543,000; Imports were £\$430,528,000. Principal customers were Lebanon (21%), France (20%) and Italy (10%); leading suppliers, Britain (13%), the U. S. (11%) and western Germany (10%). Leading Syrian exports were raw cotton (50%), wool (7%) and sheep (6%).

In 1953 Syria had 4,332 miles of highway and 517 miles of railway.

**NATURAL FEATURES; CLIMATE.** Coastal Syria is a narrow plain. Back of that is a range of coastal mountains, and still farther inland is a steppe area. In the east is the Syrian Desert, and in the southeast next to Jordan is the Jebel Druze Range. The climate is subtropical, with rainfall averaging 50 inches on the coastal range but diminishing to less than four inches in parts of the desert. Summer temperatures at Aleppo range from about 75° at night to 100° during the day; winter temperatures, from freezing to 50°.

## Thailand (Siam) (Kingdom)

(Muang Thai)

Area: 193,270 square miles.

Population (est. 1955): 20,300,000 (1937: Thal, 90%; Chinese, 3.4%; Indian and Malayan, 3.4%; others, 3.2%).

Density per square mile: 102.4.

Ruler: King Rama IX.

Prime Minister: Luang Pibul Songgram.

Principal cities (census 1947): Bangkok, 620,830 (capital, chief port); Khon Kaen, 153,934 (trading center); Buri Ram, 129,000 (farming); Thonburi, 118,682 (market center).

Monetary unit: Baht.

Languages: Thai (Siamese), Chinese.

Religions (census 1947): Buddhist, 95%; Moslem, 4%; others, 1%.

\* Including about 2,500,000 of Chinese descent born in Siam.

**HISTORY.** The Siamese first began moving down into their present homeland from the Asiatic continent in the 6th century A.D., and by the end of the 13th century ruled most of the western portion. During the next 400 years, the Siamese fought sporadically with the Cambodians to the east and the Burmese to the west. The British obtained recognition of paramount interest in Siam in 1824, and in 1896 an Anglo-French accord guaranteed Siamese independence.

A coup on June 24, 1932, changed the absolute monarchy into a representative government with universal suffrage. Thus shorn of much power, King Prajadhipok abdicated in March 1935 in favor of his nephew, Prince Ananda Mahidol. After five hours of token resistance on Dec. 8, 1941, Siam yielded to Japanese occupation and became one of the springboards in World War II for the Japanese campaign against

Malaya. After the fall of its pro-Japanese puppet government in July 1944, Siam pursued a policy of passive resistance against the Japanese, and on Aug. 16, 1944, after the Japanese surrender, Siam repudiated the declarations of war it had made against Britain and the U. S. in 1942.

By a treaty signed with Britain and India Jan. 1, 1946, Siam renounced all wartime acquisitions of Malayan territory and agreed that no canal linking the Gulf of Siam with the Indian Ocean would be cut across Siamese territory without British concurrence.

**RULER.** Rama IX, who was born Dec. 8, 1927, second son of Prince Mahidol of Songkhla, succeeded to the throne on June 9, 1946, when his brother, King Ananda Mahidol, died of a gunshot wound. He was married on April 28, 1950, to Princess Kitiyakara; their son, Vajiralongkorn, born July 28, 1952, is heir apparent.

**GOVERNMENT AND DEFENSE.** Thailand is a constitutional hereditary monarchy. Under the 1932 Constitution, restored after the Dec. 1951 *coup d'état* to replace that of 1949, there is a unicameral Parliament, half nominated, half elected. The government is administered by the Prime Minister and his Cabinet, who are responsible to the Parliament.

The 1937 defense act made military service compulsory for a period of two years between the ages of 18 and 30. The army has about 30,000 men. There is a fair-sized air force. The navy in 1955 had 11,100 men and 5 frigates and escort vessels, submarines and other smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.** Buddhist monasteries throughout Thailand control most of the elementary education in rural districts. In 1954 there were 19,331 state primary schools with 2,857,411 students and 267 state secondary schools with 96,300 students; private secondary schools had 110,797 students. The 5 institutions of higher learning had 10,656 students in 1952. Illiteracy (10 years and over) was 46.3% in 1947.

Almost 90 per cent of the population work at agriculture. Rice (1955-56: 7,711,000 metric tons) is the principal crop, the staple food and the leading export. It is the basis of Thailand's whole economy and the key to its prosperity. Next most important is rubber (exports 1955: 132,495 metric tons). Other products include coconuts, corn, tobacco, cotton, sesame, sugar cane and soybeans. Livestock, poor in quality and quantity, is used mainly for hauling. Manufacturing is of little importance, except for native handicraft and food processing. Domestic business is largely controlled by Chinese.

Recent trade statistics are as follows (in millions of U. S. dollars):

	1953	1954	1955*
Exports	322.6	283.4	335.1
Imports	336.3	311.7	333.8

\* Provisional.

Chief exports in 1955 were rice (44%), rubber (25%) and tin (6%). Leading customers in 1954 were Malaya and Singapore (34%), Japan (30%) and the U. S. (18%); leading suppliers, Japan (21%), the U. S. (14%) and Britain (10%).

There are good water routes which handle about 80 per cent of all internal traffic. Bangkok, the chief port, 25 miles up the Chaupaya River from the Gulf of Siam, handles about 80 per cent of the foreign trade. Railways under government ownership total 2,032 miles, and in 1953 there were about 4,160 miles of highway.

The 1956 budget estimated revenue at \$752,500,000 baht, ordinary expenditure at \$647,500,000 baht and capital expenditure at 1,265,900,000 baht.

#### NATURAL FEATURES AND RESOURCES;

**CLIMATE.** Thailand, about three-fourths the size of Texas, supports most of its population in the central alluvial plain which is drained by the Chaupaya River and tributaries. There are small deposits of many important minerals, and some precious stones. Only tin, gold, tungsten and salt are in commercial production. Tin output in 1940 was 20,841 tons (10% of the world total), but production in 1955 was only 11,160 metric tons (tin-in-concentrates).

Almost 70 per cent of Thailand's total land area is forested. Teak, the main forest product, covers over one-third of this area, chiefly in the northern hill country. Other forest products of Thailand include shingam wood, ironwood, ebony, rattan and sticklac.

Fisheries, both ocean and river, ordinarily rank second to agriculture in product value.

The climate is monsoonal, but the full force of the monsoons is broken by the western hills. Rainfall decreases from south to north. Humidity is always high, but temperatures fall as low as 40° in the November-February cool season. Inland temperatures often rise to 100° during the hot season.

## Trieste

This former free territory (293 sq. mi.) on the northeastern Adriatic was divided *de facto* between Italy and Yugoslavia under the provisions of a memorandum of understanding signed Oct. 5, 1954. Most of the area (202 sq. mi.) went to Yugoslavia; the smaller (91 sq. mi.) but far more densely populated part, including the city of Trieste, went to Italy.

The free territory had been created under the provisions of the Italian peace treaty of 1947 and was to be under U. N. protection. It proved to be impossible to implement the treaty provisions, and Yugoslav and Anglo-U. S. occupation forces had continued the occupation begun in 1945 of substantially the areas transferred to Yugoslavia and Italy, respectively, in 1954.

## Tunisia (Beylic)

Area: 48,332 square miles.

Population (census 1956)\*: 3,800,000 (1946, by place of birth: Tunisian, 89.9%; French, 4.5%; Italian, 2.6%; others, 3%).

Density per square mile: 78.6.\*

Ruler (Bey): Sidi Mohammed al-Amin. Prime Minister: Habib Bourguiba.

Principal cities (census 1946): Tunis, 364,593 (capital); Sfax, 54,637 (phosphate port); Bizerte, 39,327 (seaport and naval base); Sousse, 36,566 (seaport).

Monetary unit: Tunisian franc.

Languages: Arabic, French, Italian.

Religion: Predominantly Mohammedan.

\* Preliminary figures.

**HISTORY.** Tunisia was settled by the Phoenicians and Carthaginians in ancient times. Except for an interval of Vandal conquest in A.D. 439-533, it was part of the Roman Empire until the Arab conquest of 648-69. Then it was ruled by various Arab and Berber dynasties until the Turks took it in 1570-74. The founder of the present dynasty, Hussein ben'Ali, was proclaimed sovereign by the occupation troops in 1705 and later succeeded in making the office hereditary, although subject to nominal Turkish sovereignty.

Throughout much of its history, Tunisia was essentially a pirate state, preying on Mediterranean shipping. In modern times, Italy became predominant economically in the area, but after French troops occupied the area in 1881, the Bey signed a treaty acknowledging a French protectorate.

Following the Allied landings in North Africa in 1942, Tunisia became a battleground with the Axis forces pinched between the British 8th Army advancing from Libya and the U. S., British and French forces from Algeria. The Axis units surrendered in May 1943, and Tunisia was turned over to the De Gaulle government. On May 15, 1943, the reigning Bey, Sidi Mohammed al-Mounsaf, was removed and replaced by his cousin, the present ruler.

Nationalist agitation forced France to grant internal autonomy to Tunisia in June 1955 and to recognize Tunisian independence and sovereignty in March 1956.

**GOVERNMENT.** A Constitution was being drafted in 1956 by the Constituent Assembly, which was elected by popular vote on March 25, 1956. The Bey (born Sept. 4,

1881) is assisted by a Cabinet of Tunisian ministers headed by the Prime Minister. France is represented by a High Commissioner, who retains responsibility for public order until June 1957.

All 98 seats in the Constituent Assembly are held by the National Front headed by Habib Bourguiba, leader of the *Néo-Destour* party.

**SOCIAL AND ECONOMIC CONDITIONS.** In 1952-53 Tunisia's 698 public and 220 private schools had 220,257 pupils, about a fourth of them French and Italian. The Great Mosque at Tunis is a Moslem University.

Tunisia's population (by the 1946 census, 87.4 per cent Arab) is concentrated in the cities and on the coast. There are about 100,000 nomads.

Agriculture is the chief industry. Over a quarter of the arable land is in wheat (1955: 420,000 metric tons). Other important crops are barley, oats, corn, sorghum, beans and peas. Wine production in 1955 was 27,800,000 U. S. gallons. Average annual olive oil production is about 60,000 metric tons (1955: 21,000 tons). The Cape Bon region is largely devoted to citrus fruits, the southern oases to dates. In 1954 there were 3,352,100 sheep, 482,500 cattle, 1,853,000 goats and 202,200 camels.

Leading industries include flour milling, oil refining, lead smelting and distilling. Native industries include the spinning and weaving of wool, and the making of pottery and leather goods.

Tunisia, Algeria and France are under a single customs union for a number of products. Recent trade data are as follows (millions of francs):

	1953	1954	1955
Exports	39,103	44,477	37,140
Imports	60,121	59,268	63,199

Leading exports in 1955 were phosphates (15%), wheat (12%), iron ore (8%) and olive oil (7%). France took 55% of the exports and supplied 75% of the imports.

There were 5,500 miles of roads in 1952, 1,300 miles of railway in 1951. Tunis, Bizerte, Sousse and Sfax are principal ports.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** Tunisia, at the northernmost bulge of Africa, thrusts out toward Sicily to mark the division between the eastern and western Mediterranean. It is mountainous in the north, covered by plains in the east, and projects southward to the Sahara area.

Tunisia's extremely rich deposits of phosphates are mined principally in the Gafsa and Kef regions. Production in 1955 was 2,604,200 metric tons. The iron ore is of good quality (55% metal content; production in 1955: 1,140,100 tons). Other minerals are lead (1955: 42,000 tons),

zinc, mercury, manganese, copper, salt and poor-grade lignite.

The climate is Mediterranean with mean temperature extremes at Tunis of 52° and 79.2°. Annual rainfall ranges from 2 inches in the north to less than an inch in the south.

## Turkey (Republic) (Türkiye Cumhuriyeti)

Area: 296,185 square miles.

Population (census Oct. 1955)\*: 24,111,778 (Turkish, 94%; Greek, 2.2%; Bulgarian, 1.4%; Yugoslavian, .9%; others 1.5%).†

Density per square mile: 81.4.

President: Celâl Bayar.

Premier: Adnan Menderes.

Principal cities (census 1955)\*: Istanbul, 1,214,616 (chief port, commercial center); Ankara, 453,151 (capital); Smyrna, 286,311 (seaport); Adana, 172,465 (agriculture center); Bursa, 131,336 (silk, carpets); Eskişehir, 122,755 (trading center).

Monetary unit: Turkish pound (₺).

Languages: Turkish, Greek, Bulgarian.

Religions: Mohammedan, 98.6%; others 1.4%.

\* Preliminary figures. † 1935, by place of birth.

**HISTORY.** The Ottoman Turks first appeared in the early 13th century A.D. Under the leadership of their Sultans, they gradually spread their hegemony over most of the Near East and the Balkans, capturing Constantinople in 1453 and storming the gates of Vienna in the 17th century. At the height of its power, the empire stretched from the Persian Gulf to the frontiers of Poland and from the shores of the Caspian Sea to Oran in Algeria.

The defeat of the Turkish navy at Lepanto in 1571 by the Holy League and of Turkish forces besieging Vienna in 1683 portended the decline of Ottoman power, reducing Turkey to the status of a pawn in Europe's political maneuvers. Russia moved into the Balkans in the 18th century and made herself official protector of the Balkan Christians. Fear of a Russian drive on Constantinople prompted England and France to declare war on Russia, and the Crimean War (1853-56) followed. As a result of the Russo-Turkish war (1877-78), Bulgaria became practically independent, and Rumania and Serbia threw off their nominal allegiance to the sultan. Further defeats were suffered by Turkey in war with Italy (1911-12) and in the Balkan Wars (1912-13). Meanwhile, a revolution led by the Young Turks, an organization of youthful liberals, had forced the abdication of Sultan Abdul-Hamid in 1909 and established a constitutional regime.

On Aug. 2, 1914, at the outbreak of World War I, a secret alliance was signed between Germany and Turkey, whose arm was advised by a German military mission.



and in September the Allies declared war on Turkey. Turkish forces successfully defended the strategic Dardanelles, but British forces seized Palestine, Mesopotamia and Syria; and the Hejaz revolted. By 1918 Allied forces held the territory along the Dardanelles and the Bosphorus, and later Greek forces occupied Smyrna and its vicinity.

In 1919 the new Nationalist party, headed by Mustafa Kemal, was organized to resist the Allied occupation, and in 1920 a National Assembly elected Mustafa Kemal President of both the Assembly and the government. Under his leadership, the Nationalist government was recognized by foreign powers, the Greeks were driven out of Smyrna, and other Allied forces were withdrawn. The present Turkish boundaries (with the exception of Alexandretta, ceded to Turkey by France in 1939) were fixed by the Treaty of Lausanne (1923) and later negotiations. The caliphate and sultanate were separated and the sultanate abolished on Oct. 1, 1922. On Oct. 29, 1923, Turkey formally became a republic with Mustafa Kemal, who took the name of Kemal Atatürk, as its first President. He proceeded to carry out an extensive program of reform, modernization and industrialization.

The Montreux Convention (1936) gave Turkey sole responsibility for the defense of the area. On Aug. 7, 1946, Soviet Russia proposed in a note to Turkey that defense of the Straits be made a joint Turkish-Soviet responsibility under a revision of the Montreux Convention, but the proposal was opposed by both Britain and the U. S., as well as by Turkey.

General Ismet İnönü was elected to succeed Kemal Atatürk on the latter's death in 1938 and was re-elected in 1939, 1943 and 1946, but was defeated in 1950 and succeeded by Celâl Bayar. On Oct. 19, 1939, a mutual assistance pact was concluded with Britain and France. Turkey followed a neutral course during most of World War II, but on Feb. 23, 1945, she declared war on Germany and Japan, but took no active part in the conflict. After the abrogation of the Soviet-Turkish non-aggression pact in March 1945, Turkey was subjected to Soviet pressure for a share in the control of the Dardanelles. To assist Turkey in effecting modernization necessary for the preservation of its national integrity, the U. S. in 1947 agreed to advance \$100,000,000, all of which was to be used for the armed forces or to a lesser extent for economic projects directly related to Turkish defense. Turkey also received aid under the European Recovery Program. It became a full member of NATO in 1952.

**GOVERNMENT AND DEFENSE.** The Constitution, as amended in 1937, defines the

state as "republican, nationalist, populist, étatist, secular, and revolutionary." The President is chosen from the deputies of the National Assembly; his term of office is identical with the life of each Assembly. The 541 members of the Assembly are elected by universal suffrage for a term of four years. According to the Turkish Constitution, the Assembly exercises the executive power through the President and the Council of Ministers (cabinet) which is appointed by him.

The Republican People's party, which had been in power since 1923, was overwhelmingly defeated in free elections held May 14, 1950, by the Democratic party. The latter was retained in office by an even wider margin in elections held May 2, 1954, in which it won 503 seats in the Assembly. Centralization is the basis of the governmental system. The pre-republic judicial system, based on Sunni Moslem law, was replaced in 1926 by a new system based on the Swiss civil code.

**Defense.** Military service is compulsory from 20 to 45; the initial training period is three years. The strength of the army was about 375,000 in 1954.

Large purchases of modern matériel were made during World War II, and additional armaments were received from the U. S. after the war. The air force, under the direct control of the Turkish General Staff, had a strength of about 1,000 planes in 1950. The navy has 1 battle cruiser, 10 fleet destroyers and 12 submarines, in addition to smaller craft, including a number of former U. S. and British minesweepers. A regimental combat team of 5,000 men was dispatched to Korea in 1950.

#### **SOCIAL AND ECONOMIC CONDITIONS.**

**Education.** Elementary education is nominally obligatory from 7 to 12. Only 24.2% of the whole population could read and write in 1945, but 43.2% of those 7 to 16 were literate in 1950. In 1952-53 there were 17,683 primary schools with 1,728,265 pupils and 569 secondary schools and *lycées* with 116,367 pupils. There were 33 institutions of higher learning with 26,345 students. The Latin alphabet replaced the Arabic script in 1928.

**Agriculture and Industry.** Agriculture is the principal economic activity, engaging about 65 per cent of the population. Only about 20 per cent of the land is under cultivation, but the government has made great efforts to modernize and improve farming. The most important cash crop is tobacco (1955: 109,000 metric tons). Cotton (1955: 157,000 metric tons, ginned) is grown in the south of Asia Minor while figs come exclusively from the Smyrna region. Grain crops, with 1955 production in metric tons, include wheat, 6,900,000, and barley, 2,985,000. Turkey is a leading exporter of olive oil; the Brusa region and the Ionian

coast are the principal areas of cultivation. Opium poppies are grown in the Smyrna, Malatia and Tokat regions.

Turkey is rich in livestock. The most important animal is the goat, of which there were 21,045,000 in Dec. 1953, including the valuable Angora, which thrives on the uplands of the plateau. There were also 10,759,000 cattle, 27,287,000 sheep and 1,201,000 horses. Total wool production in 1955 was 20,000 metric tons, clean basis.

Staple industries have been established in iron, steel, textiles, paper, glass, sugar and cement. In 1955, 200,400 metric tons of pig iron and 188,400 tons of steel were produced. A large proportion of the factories are government-operated. Istanbul is the major industrial area.

*Trade.* Turkey's foreign trade was as follows, in millions of Turkish pounds:

	1953	1954	1955
Exports	1,108.9	937.8	877.4
Imports*	1,491.1	1,339.4	1,393.4

\* Includes military equipment imported under U. S. military assistance program.

Principal customers in 1955 were western Germany (16%), the U. S. (16%), Italy (8%) and Britain (7%). Leading suppliers were the U. S. (22%), western Germany (18%), Britain (8%) and France (6%). Chief exports were tobacco (28%), cotton (15%), hazelnuts (14%) and chrome (6%); leading imports, machinery, iron, steel, fuel and oil.

*Communications and Finance.* In June 1955, Turkey had a merchant fleet of 278 vessels (100 tons and over) aggregating 532,123 gross tons. The length of railways (1954) was 4,780 miles. Highway mileage was 27,900 in 1953.

Recent public finance data are as follows, in millions of Turkish pounds:

	1953-54*	1954-55†	1955-56†
Revenue	2,147	2,289	2,789
Expenditure	2,249	2,288	2,941

\* Provisional. † Budget estimate.

The public debt, consolidated and floating, on Dec. 31, 1955, was \$T3,060,000,000.

**NATURAL FEATURES AND RESOURCES;** **CLIMATE.** Turkey is divided into two natural areas by the historic waterway formed by the Dardanelles, the Sea of Marmara and the Bosphorus.

Turkey in Europe comprises an area about equal to the state of Massachusetts. It is hilly country drained by the Maritsa River and its tributaries. Almost all the population is concentrated in and near the two important towns, Istanbul (Constantinople) and Edirne (Adrianople). Turkey in Asia, or Anatolia, about the size of Texas, is roughly a rectangle in shape with its short sides on the east and west. Its center is a treeless plateau rimmed by mountains.

**Minerals and Forests.** Turkey's rich mineral resources are still comparatively unexploited. Deposits of copper in the large field at Arghana, near the Iraq-Syrian frontier, have been estimated at 1,600,000 tons (1955 output: 23,760 metric tons). Turkey is also relatively rich in coal, with large deposits in the Ereğli region on the Pontic coast some 150 miles from Istanbul (1955 output: 5,496,000 tons). A virtual world monopoly is enjoyed in meerschaum found in the Eskisehir district. Other important minerals of Turkey include chrome, manganese ore, iron ore, emery and antimony.

*Climate.* Along the coast from Antioch to the Dardanelles the climate is Mediterranean, with rainy winters and dry summers. Thence to the Bosphorus it is transitional to the type of climate with heavy year-round rainfall. Semitropical fruits and tea may be grown in the region beyond Trebizond on the Black Sea. The western plateau has a harsh steppe climate, with cold winters, hot summers and scanty rainfall, while the eastern plateau exhibits a transition from steppe to alpine climate. Istanbul has a mean annual temperature of 57° (maximum 99°, minimum 17°) and average yearly rainfall of 28.3 inches. Rainfall occurs approximately one day out of three.

## Union of Soviet Socialist Republics

Area: 8,602,700 square miles.

Population (est. April 1956)\*: 200,200,000 (1939: Great Russian, 58.4%; Ukrainian, 16.6%; Byelorussian, 3.1%; Uzbek, 2.9% Tartar, 2.5%; Kazakh, 1.8%; Armenian, Azerbaijani, Georgian, each 1.3%; more than 100 others, 10.8%).

Density per square mile: 23.3.

Chairman of Presidium of Supreme Council: Klementi E. Voroshilov.

Premier: Nikolai A. Bulganin.

Principal cities (est. April 1956)\*: Moscow, 4,389,000 (capital); Leningrad, 2,814,000 (industrial center, shipbuilding); Kiev, 991,000 (industrial center, Ukraine); Baku, 901,000 (oil center, Azerbaijan); Kharkov, 877,000 (iron and steel, coal); Gorki, 876,000 (industrial, transportation center); Tashkent, 773,000 (textiles, tobacco); Kuybyshev, 760,000 (industrial center, Volga port); Novosibirsk, 731,000 (Siberian industrial center); Sverdlovsk, 707,000 (Ural industrial center); Tblisi, 635,000 (building materials, tobacco); Stalino, 625,000 (coal, metallurgy).

Monetary unit: Rouble.

Languages: See Population, above.

Religions: Russian Orthodox (predominant), Mohammedan, Roman Catholic, Jewish, Lutheran.

\* Official estimate of the Central Statistical Board of the Soviet Council of Ministers.

**HISTORY.** The history of Russia begins with the perhaps legendary figure of the



Viking Rurik, who according to tradition came to Russia in A.D. 862 and founded the first Russian dynasty in Novgorod. The various tribes were united by the spread of Christianity in the 10th and 11th centuries; Vladimir "the Saint" was converted in 988. During the 11th century the grand dukes of Kiev held such centralizing power as existed. In 1240 Kiev was destroyed by the Mongols, and the Russian territory was split into numerous smaller dukedoms, out of which three large centers emerged—Galicia, Moscow and Novgorod. The early dukes of Moscow extended their dominions through their office of tribute collector for the Mongols.

In the late 15th century, Ivan III, the reigning duke, acquired the rival kingdoms of Novgorod and Tver and threw off the Mongol yoke. Ivan IV, the Terrible (1533-84), first Muscovite duke to assume the title of Tsar, is considered to have founded the Russian State. He crushed the power of rival princes and boyars (great land-owners), but Russia remained largely medieval until the reign of Peter the Great (1682-1725), grandson of the first Romanov Tsar, Michael (1613-45). Peter made extensive reforms aimed at Westernization, and through his defeat of Charles XII of Sweden at the Battle of Poltava (1709), he extended Russia's boundaries to the west. Catherine the Great (1762-96) continued Peter's Westernization program and also expanded Russian territory, acquiring the Crimea and part of Poland. During the reign of Alexander I (1801-25), Napoleon's attempt to subdue Russia was defeated (1812-13), and new territory was gained, including Finland (1809) and Bessarabia (1812). Alexander was the originator of the Holy Alliance which crushed for a time Europe's rising liberal movement. During the century between the Napoleonic Wars and World War I, a few reforms were introduced; however, the autocratic power of the Tsars remained unchanged.

During the reign of Alexander II (1855-81), Russia's borders were pushed to the Pacific and into central Asia. Serfdom was abolished in 1861, but heavy restrictions were imposed on the emancipated class. Revolutionary strikes following Russia's defeat in the war with Japan forced Nicholas II (1894-1917) to grant a representative national body (Duma), elected by narrowly limited suffrage. It met for the first time in 1906. Nicholas continued in his reactionary course, however, and the overwhelmingly liberal Duma had little or no influence in the running of the government.

World War I demonstrated the corruptness and inefficiency of the tsarist regime, although the call of patriotism held the poorly equipped army together for a time. Disorders broke out in Petrograd (now

Leningrad) in March 1917, and, following the winning over of the Petrograd garrison, the revolution was in full swing. Nicholas was forced to abdicate under pressure from the Duma and was later killed by the revolutionists. A provisional government was formed, composed of both conservative and radical elements. This government, under the successive premier-ships of Prince Lvov and Alexander Kerensky, a Menshevik or moderate socialist, soon lost ground to the radical or Bolshevik wing of the Socialist Democratic Labor party. Finally, on Nov. 7, 1917, came the Second Revolution, engineered by Nikolai Lenin and Leon Trotsky and their small but well-disciplined Bolshevik following in the Petrograd Soviet. The government was turned over the next day to the Congress of Soviets (councils of soldiers, peasants and workers), which vested the government in a Council of People's Commissars with Lenin as Premier and Trotsky as Foreign Minister. The humiliating Treaty of Brest-Litovsk (March 3, 1918) concluded the war with Germany, but civil war and intervention by foreign powers prevented the new Communist government from gaining control of all Russia until 1920. A brief war with Poland occurred in 1920, but it resulted in Russian defeat and withdrawal.

On July 6, 1923, the vast territory under Soviet rule—previously an inchoate mass whose constituent parts were changing constantly—became the Union of Soviet Socialist Republics, which was formed by the union of the Russian S.F.S.R. and the Ukrainian, Byelorussian and Transcaucasian S.S.R.'s.

The sudden death of Lenin (Jan. 21, 1924) precipitated an intraparty struggle between the group led by Joseph Stalin, General Secretary of the party, and the opposition, led by Trotsky, which favored not only swifter socialization at home but fomentation of revolution abroad. In 1927, Trotsky and other opposition leaders were expelled from the party and exiled. The first Five-Year Plan (1928-32) called for gradual, progressive increase in industrial and agricultural production. Its collectivization program was opposed by the Kulaks, or wealthier peasants, who were vigorously suppressed. Purges carried out in 1936-38 removed many prominent leaders of the Revolution and top Russian army officers.

Soviet foreign policy—first featured by friendship with Germany and antagonism toward England and France and then, after Hitler's rise to power in 1933, by participation in the League of Nations and an anti-Fascist program—took another abrupt turn on Aug. 24, 1939, with the signing of a Soviet-German nonaggression pact. Territory seized from Poland (Sept. 1939) be-



came part of the Ukrainian and Byelorussian S.S.R.'s; that secured from Finland at the conclusion of the Finnish war of 1939-40, part of the Karelian S.S.R. set up March 31, 1940; that secured from Rumania (Bessarabia and northern Bukovina), part of the Moldavian S.S.R. set up Aug. 2, 1940; and finally the formerly independent states of Estonia, Latvia and Lithuania, occupied in June 1940, were absorbed into the U.S.S.R. as the 14th, 15th and 16th Soviet Republics. The latter annexations have not been recognized by the United States, Britain, and the majority of other nations.

Immediately following the German attack (June 22, 1941), all necessary powers for the defense of the state were vested in the State Defense Council headed by Stalin, who had taken over the post of Premier on May 6. The Germans quickly seized approximately 500,000 square miles of Soviet territory, but Soviet forces resisted stubbornly, aided by increasing amounts of matériel from the U. S. and Britain. The great Soviet counteroffensive in the Stalingrad area (Nov. 1942-Feb. 1943) marked the turning point. Soviet troops gradually pushed the Nazis back and unleashed their final great offensive on Jan. 12, 1945. The nonaggression pact with Japan (1941) was denounced in April 1945, and, following the declaration of war on Japan (Aug. 8, 1945), Soviet Far Eastern forces quickly occupied Manchuria, Karafuto and the Kuriles.

After the war, with its eastern European satellites drawn together into a solid bloc in opposition to the western democracies, the Soviet Union launched a full-scale political offensive against the non-Communist world, particularly the United States and Great Britain.

Efforts to discredit Anglo-U. S. influence were initially a failure. The western powers countered the Soviet blockade of Berlin with a highly effective "airlift," completed the unification of western Germany and went on to unite western Europe into a wall of opposition to Communist aggression through the vehicle of the North Atlantic Pact.

Evidence of an atomic explosion in the Soviet Union in the summer of 1949 was reported by President Truman on Sept. 23, 1949.

Stalin died on Mar. 6, 1953. The next day Georgi M. Malenkov succeeded him as Premier. Malenkov's chief rivals for power—L. P. Beria, V. M. Molotov, N. A. Bulganin and L. M. Kaganovich—were named First Deputy Premiers. The first evidence of the expected intraparty struggle for power was revealed by the announcement on July 10, 1953, of the purging of Beria. He was executed on Dec. 23, 1953. His demise was accompanied by a rise in

importance of N. S. Khrushchev, First Secretary of the Communist party. On Feb. 8, 1955, Malenkov was demoted and replaced as Premier by Bulganin, who was formerly Defense Minister.

**GOVERNMENT.** Under the Constitution of 1936, the Soviet Union is "a Socialist State of Workers and Peasants" whose highest organ is the Supreme Council of the Union, which exercises legislative authority. It consists of two co-equal Houses—the Council of Nationalities, in which each constituent republic has 25 representatives, each autonomous republic 11, each autonomous oblast five, and each national okrug one (total 639); and the Council of the Union, elected on a nationwide basis with one representative for each 300,000 of population (total membership 708). All representatives are elected for four-year terms; the last election was held on Mar. 14, 1954. Elections amount to a blanket endorsement (or rejection) of a single list of candidates already nominated by the Communist party, youth organizations, collective farms and trade unions. The only election in the Western sense of the word takes place in the selection of the nominees by these groups. All citizens over the age of 18 are enfranchised.

The Presidium of the Supreme Council acts as a directive body between the sessions of the Supreme Council. It has a Chairman (sometimes referred to as the Soviet President), 15 Vice Chairmen (one for each constituent republic), a Secretary and 15 members, all elected by the Supreme Council.

Details concerning the constituent republics of the U.S.S.R. are as follows:

Republic and capital	Area sq. mi.	Population Est. April 1956* (thousands)
Russian S.F.S.R. (Moscow)	6,592,443†	113,200†
Ukraine (Kiev)	232,618	40,600
Kazakhstan (Alma Ata)	1,063,242	8,500
Byelorussia (Minsk)	80,154	8,000
Uzbekistan (Tash- kent)	157,336	7,300
Georgia (Tbilisi)	29,488	4,000
Azerbaijan (Baku)	33,089	3,400
Lithuania (Vilnius)	25,174	2,700
Moldavia (Chisinau)	13,050	2,700
Latvia (Riga)	24,903	2,000
Kirghizia (Frunze)	76,023	1,900
Tadzhikistan (Sta- linabad)	55,058	1,800
Armenia (Erivan)	11,506	1,600
Turkmenistan (Ash- khabad)	187,181	1,400
Estonia (Tallinn)	17,413	1,100

\* Official estimate of the Central Statistical Board of the Soviet Council of Ministers. † Including the Karelo-Finnish S.S.R., incorporated into the R.S.F.S.R. in July 1956.

The highest executive and administrative power is exercised by the Council of Ministers (formerly People's Commissars) appointed by the Supreme Council and headed by a Chairman (Premier) and the Vice Chairmen. It issues decrees and executive orders on the basis of laws in operation and supervises their execution. The administrative machinery is necessarily vast and complicated, since it is responsible not only for the ordinary administrative functions of government, but also for the operation of enterprises which are state-owned.

Postwar territorial acquisitions include the Carpatho-Ukraine (12,617 sq. mi.) obtained from Czechoslovakia June 29, 1945, incorporated into the Ukrainian S.S.R.; the Republic of Tannu Tuva in central Asia (64,000 sq. mi.) incorporated early in 1945 into the R.S.F.S.R.; Karafuto or southern Sakhalin (13,935 sq. mi.) and the Kurile Islands (3,944 sq. mi.), occupied by Soviet troops in Aug., 1945, and incorporated into the R.S.F.S.R.; the northern part of eastern Prussia (about 7,000 sq. mi.), placed under *de facto* Soviet administration at the Potsdam Conference and incorporated into R.S.F.S.R.; the Petsamo district of Finland, obtained *de jure* under the 1947 treaty and incorporated into the R.S.F.S.R.; and Poland east of the Curzon line (69,860 sq. mi.), under terms of the Soviet-Polish treaty of Aug. 16, 1945, incorporated into the Ukrainian and Byelorussian S.S.R.'s.

**COMMUNIST PARTY.** The only political party permitted to exist in the Soviet Union is the All-Union Communist party, which claimed 7,215,505 members in Feb. 1956. Its organization parallels the entire governmental and economic structure of the country and guides all important action through instructions from the central organs to party members who occupy most of the important political and economic positions. Its highest organ is the All-Union Party Congress, which meets irregularly. The Congress elects a Central Committee (133 members and 122 alternates), which in turn elects (1) an executive body (Presidium), (2) a Secretariat headed by the First Secretary (N. S. Khrushchev) and (3) a Committee of Party Control.

Members of the Presidium of the Central Committee in July 1956 were N. S. Khrushchev, N. A. Bulganin, K. E. Voroshilov, V. I. Molotov, L. M. Kaganovich, M. G. Gervukhin, M. A. Saburov, A. I. Mikoyan, B. M. Malenkov, A. I. Kirichenko, M. A. Suslov; candidate members, N. M. Shvershik, G. K. Zhukov, Mme. E. A. Furtseva, K. I. Brezhnev, N. A. Mukhlitdinov.

**DEFENSE.** The land, air and sea forces are under control of the Defense Ministry. Military service is compulsory; the initial training period varies from 2 to 5

years. The armed forces, which were estimated to have reached a peak of more than 15,000,000 men in 1945, numbered between 4,350,000 and 4,600,000 men in early 1956. The strength of the army, including MVD and MGN troops (secret police organizations with paramilitary formations), was between 2,800,000 and 3,200,000. The air force had between 750,000 and 800,000 men and 23,000 planes, including advanced models of jet fighters and bombers. The navy had between 600,000 and 750,000 men. A reduction of about 640,000 in armed force strength was said to have been made in 1955 and a further reduction of 1,200,000 was scheduled to be made by May 1, 1957.

Information about the Red fleet is as vague as that about the army and air force. In Dec. 1955, it was believed to have 3 battleships, 31 cruisers, 140 destroyers, 200 frigates and escort vessels, 450 submarines, and many coastal and river craft, patrol vessels, minesweepers and various other small ancillary craft. Naval construction was emphasized in postwar five-year plans. Plans for putting 375 warships into reserve were announced in May 1956.

**SOCIAL AND ECONOMIC CONDITIONS.**  
**Education.** The school system throughout the country is based upon uniform text books and the same syllabus, although a number of hours are allowed for native language, literature and history in the non-Russian schools. All schools are state controlled, and compulsory education begins at the age of seven. Coeducation is being abolished and separate schools established for boys and girls. The boys' curriculum stresses military training; the girls', housework. Enrollment in primary and secondary schools in 1954-55 was 39,000,000. Under the Defense Ministry are the Suvorov military schools, established for the training of future officers. In 1954-55 856 institutions of higher learning had 1,800,000 students, including 600,000 taking correspondence courses. Literacy in Russia was estimated at over 90% in 1950.

**Agriculture.** Formerly an agricultural country, the Soviet Union has grown since about 1920 into an industrial-agricultural power, with agriculture making great advances at the same time. The total area under cultivation was 259,500,000 acres in 1913, 291,600,000 acres in 1929, 361,361,000 acres in 1950 and 458,900,000 acres in 1955.

The Union's diverse climate permits the growing of the most varied crops, ranging from the temperate to the subtropical. Under the fourth Five-Year Plan, grain production increased to 124,700,000 metric tons in 1950 (a 5% increase over the pre-war average) and was to have been increased to 187,000,000 tons under the fifth Five-Year Plan (1951-55). This target was not reached, however, and the 1955 crop



probably did not exceed 150,000,000 tons. Moreover, that figure represented the standing crop; the amount actually harvested and made available for consumption was placed at 103,000,000 tons as compared with 79,800,000 tons in 1950.

Large increases in the production of other crops were projected, and in many cases attained, under the fourth and fifth Five-Year Plans; and further increases were projected under the sixth Five-Year Plan (1956-60), details of which were revealed in Jan. 1956 and approved at the 20th party congress in Feb. 1956.

The progress of the livestock industry during the fifth Five-Year Plan was particularly disappointing.

**Industry.** Almost all industry in the Soviet Union is carried on by organizations owned or controlled by the state. About 80 per cent of the total state industries is controlled by 291 large trusts. The industrialization of the country has been a major objective of its leaders. Completion of the first two Five-Year Plans (1928-32, 1933-37) and of most of the third (1937-42) saw a great increase in the volume and versatility of Soviet industry.

The large-scale evacuation of plants to the East and the construction of new plants there during World War II, coupled with the eastward orientation of industry prior to the war, has shifted the balance to newly developed regions in Central Asia and Siberia from the Moscow-Leningrad area and the Ukraine. The new regions are now the center of Soviet industrial power, accounting for almost all magnesium and aluminum production, and more than 60 per cent of the pig iron and steel production. The production of consumers' goods continues to be subordinate to the production of heavy capital equipment.

Large increases in production were reported under the fourth and fifth Five-Year Plans and further increases were projected under the sixth Five-Year Plan. The following table shows production of key items in 1940 and 1955 and planned production in 1960, in millions of metric tons:

	1940 Actual	1955 Actual	1960 Target
Pig Iron	14,900	33,300	53,000
Steel	18,300	45,300	68,300
Rolled metal	13,100	35,300	52,700
Cement	5,700	22,500	55,000
Paper	812	1,862	2,722
Cotton textiles	3,954*	5,904*	7,270*
Motor vehicles	145†	445†	650†
Tractors	32‡	163‡	322‡
Electricity	48‡	170‡	320‡

\* Millions of meters. † Thousands of units. ‡ Billions of kwh.

Employment in 1955 totaled 48,400,000 (31,200,000 in 1940) of whom 17,400,000 (11,000,000 in 1940) were employed in industry.

## ANIMAL INDUSTRY (millions of head)

	1941*	1951*	1955*
Cattle	54.5	57.1	67.1
Cows	27.8	24.3	29.3
Hogs	27.5	24.4	53.3
Sheep	79.9	82.6	123.3
Goats	11.7	16.4	17.7

\* Jan. 1. † Oct. 1.

**Foreign Trade.** Soviet foreign trade is a state monopoly, and foreign goods are purchased in accordance with an over-all plan conducted under the supervision of the Foreign Trade Ministry. Connected with the Ministry are a number of export import and transport combines.

No complete trade statistics have been issued since 1938. Exports were unofficially placed at \$1,141,000,000 in 1955; imports, \$1,049,000,000. Chief customers were European satellites of the U.S.S.R. 71.3%; Germany 8.3%; Britain 7.5%; and the U. S. 3.5%; leading suppliers, European satellites 60.6% and Germany 14.5%. According to an official report, the chief exports in 1955 were machines and equipment 22.1%; metals 15.2%; cotton 11.3%; grain 10.3% and petroleum and products 6.4%. Chief imports, machines and equipment 33.0%; textile raw materials 6.0%; metals 5.3%; ores and concentrates 4.2% and meat 4.2%.

**Communications.** According to *Lloyd's Register of Shipping*, the merchant marine on June 30, 1955, had 1,158 ships (100 tons and over) of 2,505,850 gross tons. Merchant ship construction has been subordinated to naval construction under the postwar five-year plans. The principal ports are Leningrad on the Gulf of Finland, Murmansk and Archangel on the Arctic Ocean and White Sea, respectively; Vladivostok on the Sea of Japan; and the Black Sea ports of Odessa, Sevastopol, Novorossiysk and Batum. River and canal transport is extremely important. In 1950 there were about 75,000 miles of navigable rivers and canals.

Railway mileage was officially placed at 74,955 in 1955, over one-third double tracked. In that year railways carried 1,641,400,000 passengers and 1,267,000,000 metric tons of freight. Highway mileage (1945) totaled 849,520, but only 7,146 miles (less than in Vermont) were reported. All-weather roads in 1949. Under the sixth Five-Year Plan, over 4,000 mi. of new track were to be constructed—twice that constructed during 1951-55—and 4,100 mi. of single track were to be doubletracked and over 5,000 mi. were to be electrified.

Air traffic is assuming great importance especially in the central Asiatic portion of the U.S.S.R. Prior to World War II, the network of air routes covered 69,845 miles. In 1950 the estimated length was 109,000 miles.



lles, over which some 2,000,000 passengers are carried (300,000 in 1938). Moscow is connected with the capitals of all the Union republics by daily air service, and there are regular services to the Far East and Europe.

**Finance.** Recent financial data are as follows, in billions of roubles (budget estimates):

	1954	1955	1956
Revenue	572.5	590.2	592.8
Expenditure	562.8	563.5	569.6

The budget includes charges for the financing of industry, transportation, agriculture and commerce—items which ordinarily are handled through private channels in other countries.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** The U.S.S.R. is the largest unbroken political unit in the world, occupying more than one-seventh of the land surface of the globe. The greater part of its territory is a vast plain stretching from eastern Europe to the Pacific Ocean. This plain, relieved only occasionally by low mountain ranges (notably the Urals), consists of three zones running east and west: (1) the frozen marshy tundra of the Arctic; (2) the more temperate forest belt; and (3) the steppes or prairies to the south, which in southern Soviet Asia become sandy deserts. The topography is more varied in the South, particularly in the Caucasus between the Caspian and Black Seas, and in the Tien-Pamir mountain system bordering Afghanistan, Sinkiang and Mongolia. Mountains (Stanovoi and Kolyma) and great rivers (Amur, Yenisei, Lena) also break up the sweep of the plain in Siberia.

**Minerals.** The U.S.S.R. is probably the richest country in the world in mineral resources, containing deposits of almost every known mineral. It ranks among the top producing nations in coal, chromite, iron ore, petroleum, gold, copper, manganese and other products. The richest mineral region is that of the Ural Mountains, which lacks only good coking coal. Total coal and lignite production in 1955 was officially reported at 391,000,000 metric tons and was to be increased to 593,000,000 metric tons by 1960. Petroleum production in 1955 was reported at 70,800,000 metric tons (about 500,000,000 barrels) and was to be increased to 135,000,000 tons by 1960. Official production estimates for other minerals and metals included aluminum (1955) 365,000 short tons; copper (1955) 2,500 short tons; gold (1955) 10,000,000 oz.; lead (1955), 255,000 short tons; nickel (1955), 272,000 short tons; silver (1954), 1,000,000 oz.; zinc (1955) 300,000 short tons; iron ore (1955), 71,900,000 metric tons. Uranium deposits are known to exist in the Soviet Union.

**Forests.** With a forested area of about 2,500,000,000 acres, the U.S.S.R. possesses a large proportion of the world's timber reserves. Most of the forested area is in Siberia, but there are also valuable stands in the Caucasus. Plans were made late in 1948 for the planting of huge forest belts 60 to 90 mi. wide in the southern steppes to protect fertile food-producing areas from the dry winds of the central Asian and Caspian deserts. Cut timber production in 1955 was estimated at 197,000,000 cu. m.

**Fisheries and Furs.** The rivers, lakes and surrounding seas (except the Black Sea) are rich in fish; the catch in 1955 was estimated at 2,498,000 metric tons. The acquisition of former Japanese fisheries in Karafuto and the Kuriles greatly increased output of the Far Eastern fish industry. Trapping is an important secondary industry, especially in eastern Siberia.

**Climate.** The climate necessarily is varied, but for the most part is continental. In general the climate of the northern and central regions is characterized by long, cold winters and by summers which are shorter and cooler than those in the northern part of the United States. Siberia has the coldest winters in the world; the January average at Verkhoyansk is  $-59^{\circ}$ . In the southern regions the climate varies between temperate and subtropical. The Uzbek, Turkmen and Kazakh S.S.R.'s are largely desert and semi-desert areas. In the central belt rainfall is fairly uniform, averaging about 15 inches east of the Urals and 20 inches to the west. In the tundra to the north it drops to about 8 inches and to 4 inches in the southern regions.

Average daily low temperature at Moscow is about  $5^{\circ}$  (high,  $14^{\circ}$ ) in January, which is the coldest month; average daily high is  $71^{\circ}$  during July, which is the warmest month.

## Uruguay (Republic)

### (República Oriental del Uruguay)

Area: 68,369 square miles.

Population (est. 1954): 2,800,924 (1950: white, 89.1%; others, 10.9%).

Density per square mile: 41.0.

President of Federal Council (1956-57): Alberto Fermin Zubiria.

Principal cities (est. 1954): Montevideo, 810,969 (capital); Mercedes, 44,900 (farming center); Salto, 44,900 (cattle raising); Paysandú, 44,000 (meat packing).

Monetary unit: Peso.

Language: Spanish.

Religion: Roman Catholic.

**HISTORY.** Juan Diaz de Solís, a Spaniard, discovered Uruguay in 1516, but the Portuguese were first to settle it when they

founded Colonia in 1680. After a long struggle, Spain wrested the country from Portugal in 1778. Uruguay revolted against Spain in 1811, only to be conquered in 1816-20 by the Portuguese from Brazil. Independence was reasserted with Argentine help in 1825, and the republic was set up in 1830. There followed a long period of factional strife between two groups still in existence at the present time—the Blancos and the Colorados.

**GOVERNMENT AND DEFENSE.** Under the 1934 Constitution, as amended in 1951, the executive power is exercised by a Federal Council of 9 members, 6 of the majority and 3 of the minority party, normally elected for 4-year terms. The presidency of the Council is rotated annually. There is a bicameral Congress composed of a 99-member Chamber of Deputies and a 31-member Senate elected for 4 years. All literate citizens of Uruguay may vote, including women, who may also sit in congress.

Service in the army (1950 strength: 26,000) is voluntary, but national guard service is compulsory in wartime. There is a police force of about 5,500, and a small air force. The navy has 2 frigates, 4 patrol vessels and several smaller craft.

**SOCIAL AND ECONOMIC CONDITIONS.** Uruguay's illiteracy rate is 35 per cent; primary education is compulsory, and all education is free. In 1952, there were 1,957 primary schools with 261,178 pupils and (1951) 115 secondary schools with 37,858 students. The university at Montevideo had 11,603 students in 1951. Uruguay's high percentage of white population includes many foreign-born, mostly Italian and Spanish, but there are some Brazilian, Argentine and French.

Cattle, sheep, meat and wool dominate the Uruguayan economy. With nearly 80 per cent of its grassy land devoted to grazing, there were in 1954, 27,000,000 sheep and about 8,000,000 cattle. Wool production in 1955 was 57,000 metric tons, clean. With only about 5 per cent of the land cultivated, a third of this grows wheat, the chief crop (1955-56: 797,000 metric tons). Other crops are corn, flax for linseed, oats, potatoes, beans, fruits, tobacco, alfalfa and grapes. Wine production for the year 1955 was about 25,600,000 U. S. gallons.

Uruguay slaughters more than two million head of cattle and sheep a year, and meat processing is the largest manufacturing industry. There are many modern plants for chilling or freezing meat, and plants for liquid extract of beef.

During World War II Uruguay doubled its foreign trade, and most of the increase went to the U. S. Recent data are as follows (in millions of U. S. dollars):

	1953	1954	1955
Exports	269.5	248.9	183.2
Imports	193.4	273.1	220.0

In value, wool was the chief export (57%) in 1955, followed by meat (8%), hides (8%) and wheat (6%). In 1954, chief customers were Britain (19%), Brazil (14%), the U. S. (13%) and the Netherlands (13%); leading suppliers, the U. S. (17%), Britain (15%) and Brazil (12%). Leading imports included machinery, vehicles, gasoline, textiles and sugar.

Railway mileage in 1954 totaled 1,920 miles. Prior to 1948, 90 per cent was British-owned, but in that year the government purchased complete interest. Road mileage was 26,000 in 1948, of which 3,051 mi. were paved. On June 30, 1955, the merchant marine had 41 vessels (100 tons and over) of 65,846 gross tons.

The 1955 budget provided for expenditure of 505,700,000 pesos. The fund for public debt on Dec. 31, 1954, was 1,200,000,000 pesos.

**NATURAL FEATURES; CLIMATE.** Uruguay has a low rolling plain in the south and a low plateau in the north, has a 120-mile Atlantic shore line, a 235-mile frontage on the Río de la Plata, and 270 miles on the Uruguay River, its western boundary. The climate is good. Average summer temperature in January and February is 71°, and average winter temperature in July is 56°. Frost is almost unknown. Average rainfall is 35 inches, heaviest in the autumn.

## Vatican City State (Stato Città Vaticana)

Area: 108.7 acres.  
Population (est. 1952): 947 (Italian 85%; Swiss and others, 15%).  
Ruler: The Supreme Pontiff, Pius XII.  
Monetary unit: Lira.  
Languages: Latin, Italian.  
Religion: Roman Catholic.

The Vatican City State, sovereign and independent, is situated on the Vatican hill on the right bank of the Tiber in northwest Rome. The area has been intimately associated with the history of the Roman Catholic Church since the time of the martyrdom of St. Peter. From it the Pope exercised temporal sway for many centuries over a large part of central Italy. In 1859 the Papal States comprised an area of some 17,000 square miles. During the struggle for Italian unification, from 1861 to 1870, most of this area became part of Italy.

By an Italian law of May 13, 1871, the temporal power of the Pope was abrogated, and the territory of the Papacy was confined to the Vatican and Lateran palaces and the Villa of Castel Gandolfo. T

opes consistently refused to recognize his arrangement, and by the Lateran treaty of Feb. 11, 1929, between the Vatican and the Kingdom of Italy, the exclusive dominion and sovereign jurisdiction of the Holy See over the city of the Vatican was again recognized, thus restoring the Pope's temporal authority over the area. Accompanying the treaty were conventions regulating the position of the Catholic Church in Italy and providing for reimbursement to the Vatican in final settlement of the claims of the Holy See against Italy for the loss of temporal power in 1870-71.

The Supreme Pontiff is Pius XII (Eugenio Pacelli), born at Rome, March 2, 1876, proclaimed cardinal in 1929, and elected Pope on March 2, 1939. He was crowned on March 12.

The Pope has full legal, executive and judicial powers. Executive power over the area is in the hands of a Governor appointed by the Pope and exclusively responsible to him.

The College of Cardinals is the Pope's chief advisory body, and upon his death the cardinals elect his successor for life. The cardinals themselves are created for life by the Pope. When complete, the College consists of 70 members.

The central administration of the Roman Catholic Church throughout the world is carried on in the Vatican by 12 congregations, 3 tribunals and 5 offices.

In its diplomatic relations with foreign countries, the Vatican is represented by the Papal Secretary of State. In 1955 the Vatican maintained diplomatic relations with 42 states through its papal-nuncios (ambassadors) and inter-nuncios (ministers). Apostolic Delegates, representatives without accredited rank, are maintained in a number of other countries throughout the world.

The Vatican has its own railway station, postal facilities, coinage, newspaper, radio and television system. In addition to the Vatican itself, which includes St. Peter's square, extraterritorial rights are enjoyed in 13 buildings in the city of Rome outside Vatican City.

## Venezuela (Republic)

### (República de Venezuela)

Area: 352,143 square miles.  
Population (est. Dec. 1955): 6,000,000\*  
 mestizo, 65%; white, 20%; Negro, 8%; Indian, 7%.)  
Density per square mile: 17.0\*  
President: Marcos Pérez Jiménez.  
Principal cities (est. 1953): Caracas, 1,048 (capital); Maracaibo, 304,313 (oil); Arquisimeto, 132,123 (sugar, coffee, mining); Valencia, 105,315 (farming center).

Monetary unit: Bolívar.  
Language: Spanish.  
Religion: Roman Catholic.  
\* Excludes tribal Indians.

**HISTORY.** Venezuela, a third larger than Texas, has a stormy political past and the distinction of being the world's second greatest producer of oil, outranked only by the U. S. Simón Bolívar, who led the liberation of much of the continent from Spain, was born in Caracas.

Columbus discovered Venezuela on his third voyage in 1498. A subsequent Spanish explorer, for reasons of his own, gave the country its name, meaning "Little Venice." There were no important settlements until Caracas was founded in 1567. With Bolívar taking part, Venezuela was one of the first South American colonies to revolt against Spain in 1810, but it was not until 1821 that independence was won. Federated at first with Colombia and Ecuador, the country set up a republic in 1830, and then sank for many decades into a condition of revolt, dictatorship and corruption. From 1908 to 1935, when he died, General Juan Vicente Gómez ruled tyrannically over the nation, picking various satellites to alternate with him in the presidential palace.

Dr. Rómulo Betancourt and his party, the liberal Acción Democrática, won 137 out of 160 seats in an election held Oct. 27, 1946, for a constituent assembly to draft a new Constitution. The well-known writer, Rómulo Gallegos, easily won the presidential election held on December 14, 1947, as the candidate of Acción Democrática.

On Nov. 24, 1948, the Venezuelan army ousted Gallegos and established a military junta which was reconstituted on Nov. 27, 1950. Following elections for a constituent assembly on Nov. 30, 1952, the junta presented its resignation to the army, which named Col. Marcos Pérez Jiménez as provisional President on Dec. 2, 1952. His selection was confirmed by the constituent assembly.

**GOVERNMENT AND DEFENSE.** Venezuela comprises 20 states, a federal district and two territories. Under the 1953 Constitution (Venezuela's 21st) the Congress consists of a 42-member Senate elected by state legislatures and a 104-member Chamber of Deputies elected directly. The President is elected by popular vote for five years.

Military service is compulsory, with a one- to three-year initial training period. The army has about 10,000 men. The navy has 3 destroyers, 4 frigates and several other smaller craft. There is a small air force.

**SOCIAL AND ECONOMIC CONDITIONS.** Illiteracy in 1949 was estimated at 60 per cent. Primary education between ages of



7 and 14 is compulsory. In Dec. 1954, 7,014 primary schools reported 608,976 pupils enrolled; 197 secondary and special schools had 33,481. There are five universities—Los Andes at Mérida, Central University at Caracas, Zulia at Maracaibo, and two Catholic universities at Caracas.

Agriculture engages the majority of the population, but production has failed to keep pace with the food needs of the rapidly increasing population. The principal crop is coffee, grown on 60,000 plantations on the slopes of the coastal mountains. Annual production averages 800,000 bags of 60 kilograms each. Exports of cacao in 1955 were 16,046 metric tons. Other important crops are sugar, tobacco, cotton, corn, wheat and tropical fruits. Stockraising, which is centered east of Lake Maracaibo, and on the llanos, is important. In 1950 there were 5,359,654 cattle and 1,292,808 hogs.

There are few industries, the most important being woodworking, cotton textiles and tobacco products. Electric power is plentiful, and a law of 1943 prepared the way for the beginning of an oil refining industry. In 1955, 195,900,000 bbl. of crude petroleum were refined and 3,277,724,000 cigarettes and 1,282,295 metric tons of cement were produced. Venezuela's first steel plant is under construction near Puerto Ordaz.

Oil, most of which is found on the northwest shore of Lake Maracaibo, is by far the dominant factor in the economy. It accounts for 95 per cent of exports, gives the country a big foreign trade balance and a treasury surplus. Recent foreign trade statistics, in millions of bolívares, are as follows:

	1953	1954	1955*
Exports	4,841.7	5,661.0	6,408.7
Imports	2,748.9	2,745.8	2,959.6

\* Provisional.

In 1954 the U. S. supplied 62% of the imports, Britain, 8%. Leading imports were machinery and equipment, metals and manufactures, foodstuffs, beverages and textiles. In addition to petroleum and products (94%), the chief exports were iron ore, coffee and cacao. Most of the crude oil goes to the U. S. via the islands of Curaçao and Aruba, refining centers in the West Indies.

Highways include 3,829 miles for all-weather use, and 1,600 miles of unimproved road. Railway mileage is approximately 760. It consists largely of unconnected short lines.

The 1956-57 budget was balanced initially at 2,670,000,000 bolívares. There is no foreign debt.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** An unusual setting of mountain

systems breaks Venezuela into four distinct areas: (1) the Maracaibo lowlands; (2) the mountainous region in the north and northwest; (3) the Orinoco basin with the llanos (vast grass-covered plains) on the northern border and great forest areas to the south and southeast; (4) the Guaiquer Highland, south of the Orinoco, accounting for nearly half the national territory. About 80 per cent of Venezuela is drained by the Orinoco and its 400 tributaries.

Oil production increased from 116,000 barrels in 1931 to 787,382,000 barrels in 1955 (1954: 691,787,785 barrels). In addition to oil, Venezuela has gold mining in the region southwest of the Orinoco delta. Output in 1955 was 61,150 tons of gold. Of minor importance are bauxite, copper, tin, asbestos and asphalt. Diamond production in 1955 was 141,147 carats. A subsidiary of Bethlehem Steel Corp. began the mining of iron ore in the El Pao area south of the Orinoco river in 1950, where a U. S. Steel Corp. subsidiary is exploiting a rich "iron mountain" south of Ciudad Bolívar on the Orinoco. Production of iron ore in 1955 totaled 8,439,451 metric tons (1954: 5,420,596 tons).

The climate is tropical and unhealthy except where modified by altitude; it approaches the mild temperate in the high western mountains. Most rainfall occurs between April and October, and the rest of the year is dry. At La Guaira, the mean annual temperature is 81°, at Caracas, 78°, at Cumaná, 83°.

## Vietnam

Vietnam ("Land of the South") was divided at the Geneva conference in July 1954 along the 17th parallel, the northern part going to the Communist-dominated Vietminh. Elections for a unified government were to be held within 2 years. There appeared to be little likelihood in 1956 that such elections actually would be held.

After World War II, the Republic of Vietnam—at that time comprising Tonkin and northern Annam—was recognized by the French as a free state within the Indo-Chinese Federation and the French Union. The French refusal to accede to demands of Vietnam leaders headed by Ho Chi Minh, a Communist, for the cession of Cochinchina to the new state and the continued landing of French troops led to the outbreak of hostilities with Ho Chi Minh's Vietminh in Dec. 1946.

Amid the hostilities, protracted negotiations ensued regarding the future legal status of Indo-China. France installed Bao Dai, former Emperor of Annam, head of a new French-supported state

Vietnam (to which Cochín-China acceded in 1949) and under agreements concluded with Vietnam and subsequently with Laos and Cambodia, all of which were finally ratified in 1950, the three states were recognized with some reservations as independent associated states within the French Union.

Meanwhile, the Vietminh forces, organized as the Democratic Republic of Vietnam and recognized by the U.S.S.R., Communist China and other states of the Soviet bloc, acquired a hold on most of Vietnam outside the large urban centers and heavily settled delta areas which, with the aid of Communist Chinese logistical support, they held and even extended despite persistent pressure by French and associated troops.

## National State of Vietnam (Republic)

Area: 64,451 square miles.  
Population (est. 1955): 12,000,000.  
Density per square mile: 186.2.  
President: Ngô Đình Diệm.  
Principal cities (est. 1955): Saigon-Cholon, 1,900,000 (capital, chief port); Huế, 93,200 (rice, sawmills); Tourane, 9,900 (port, naval base).  
Monetary unit: Piastre.  
Languages: Annamese, French.  
Religions: Buddhism, Christianity.

The national state of Vietnam comprises the southern part of the former state of Viet-Nam and includes all of the former state of Cochín-China and the southern part of Annam. It is a member of the French Union, but its new status has not been fully defined.

Considerable discord and unrest prevailed after the partition. In a referendum held on Oct. 23, 1955, the people voted overwhelmingly in favor of Ngô Đình Diệm as Chief of State in place of Bao Dai. Diệm proclaimed a republic on Oct. 26 and became its first President. His supporters won most of the seats in the first National Assembly elections held in March 5, 1956.

About 90% of the people derive their livelihood from agriculture, most of them being employed in growing rice and rubber. The Mékong delta is one of the leading rice-exporting areas in the world. Production in 1955 included rice 2,681,090 metric tons; rubber 66,337 tons. Other crops are tea, coffee, maize, tobacco, kapok and pepper. Water buffalo are used chiefly for draft purposes.

Factories, centered in Saigon-Cholon, make small and process goods for local consumption and agricultural and forest products for export. Most important are the rice and sawmills.

In 1955, exports totaled 2,415,406,000 piastres; imports, 9,211,626,000 piastres. Leading exports were rubber (61%) and rice (13%). Leading customers were France (31%), the U. S. (23%), and Cambodia (14%); leading suppliers, France (51%), Japan (13%) and the U. S. (12%).

Rivers and canals are an important means of transport. A railway runs up the coast from Saigon, and there is a good network of highways.

The area consists essentially of the vast Mékong river delta and to the north, part of the Annamese cordillera and the adjoining coastal plain.

Forests are mostly of secondary growth and of limited commercial value, except for mangrove stands in the extreme south. Mineral resources are limited. Coal is most important; some deposits of phosphates and gold exist.

The climate is monsoonal, with nearly all the very heavy rainfall between May and October.

## Democratic Republic of Vietnam

Area: 62,808 square miles.  
Population (est. 1955): 13,000,000.  
Density per square mile: 206.9.  
President: Ho Chi-minh.  
Premier: Pham Van-dong.  
Principal cities (est. 1953): Hanoi, 297,900 (capital); Haiphong, 188,600 (chief port).  
Monetary unit: Dong.  
Languages: Annamese, Chinese, French.  
Religions: Buddhism, Christianity.

The republic of Vietnam comprises the northern part of the former state of Viet-Nam and includes all of the former state of Tongking and the northern part of Annam. It is no longer a part of the French Union. The government of the republic is organized along typical Communist lines.

The economy is based on agriculture and mining. The chief crop is rice, grown chiefly in the Red River delta and supplying in most years the requirements of the population. Other crops are maize, arrowroot, sugar cane, tea, coffee, tobacco and sweet potatoes. Industry is not highly developed. There are important coal mines in the Quangyen basin near Haiphong. Tin, limestone and gold also are produced. A railway runs south from Hanoi along the coast and in the north connects through Langson with the railway network of Communist China.

The area consists principally of the Red River delta in the north and the northern coastal plain of Annam. The climate is similar to that of south Vietnam, although the winters are cooler and the precipitation greater.

## Yemen (Kingdom)

Area: c. 75,290 square miles.  
 Population (est. 1953): 4,500,000.  
 Density per square mile: c. 59.8.  
 King: Ahmad ibn Yahya Hamid ed-Din.  
 Premier: Seif ul-Islam el-Badr.  
 Principal cities (est.): Sana, 50,000 (capital); Hodaida, 30,000 (chief port); Taiz, 12,000 (seat of government).  
 Monetary unit: Maria Theresa dollar (riyal).  
 Language: Arabic.  
 Religion: Moslem.

The history of Yemen, in the southwest Arabian peninsula fronting the Red Sea, dates back to the Minaean kingdom (1,200-650 B.C.). It accepted Islam in 628 A.D. and in the 10th century came under the control of the Rassite dynasty of the Zaidi sect, which still rules. The Turks occupied the area from 1538 to 1630 and from 1849 to 1918. Its sovereign status was confirmed by treaties signed with Saudi Arabia and Britain in 1934. Yemen was admitted to United Nations membership in 1947.

Yemen is an absolute monarchy. The present ruler came to the throne in 1948, after insurgents murdered his father. Nearly all the population of the country is settled and nomadism prevails only in the lowlands.

Unlike most of Arabia, the Yemeni highlands are well adapted to agriculture; they produce grain, fruit, vegetables and Mocha coffee. Stock raising flourishes, particularly in the lowlands. Exports include coffee and hides.

The narrow coastal plain rises sharply to a maritime range and central plateau (highest point, 12,336 ft.). Winter temperatures in the highlands fall below 40° F. and summers are cool.

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## Yugoslavia (Republic)

(Federaciona Narodna Republika Jugoslavija)

Area: 98,700 square miles.  
 Population (est. 1955): 17,557,000 (1953: Serbian, 41.7%; Croat, 23.5%; Slovene, 8.8%; Macedonian, 5.3%; Albanian, 4.4%; others, 16.3%).  
 Density per square mile: 177.9.  
 President: Josip Broz (Tito).  
 Principal cities (census 1953): Belgrade (Beograd), 469,988 (capital); Zagreb, 350,452 (Croat commercial center); Ljubljana, 138,211 (Slovenian industrial center); Sarajevo, 135,657 (Bosnian manufacturing center); Skopje, 121,551 (capital, Macedonian); Subotica, 115,402 (wheat).  
 Monetary unit: Dinar.  
 Languages: Serbo-Croat, Slovene, Macedonian (all official).  
 Religions (est. 1952): Greek Orthodox, 49.6%; Roman Catholic, 36.8%; Moslem, 12.5%; others, 1.1%.

**HISTORY.** Yugoslavia, twice the size of Pennsylvania and fronting on the Adriatic Sea opposite Italy, was formed in 1919 out of some of Europe's oldest trouble spots—the Balkans. After a brief and unstable history of 25 years, it emerged from World War II as a Russian satellite. World War II, however, followed an attack made June 28, 1948, by the Soviet-dominated Cominform on Marshal Tito and the Yugoslav Communist party for inspiring a "hateful" policy against the Soviet Union and retreating from the Communist line in foreign and domestic policies. Until other officials similarly attacked by Soviet organs in the past, Tito denounced the Cominform's action and still continued to hold full power despite further repeated attacks on him by the Cominform and members of the Soviet east European bloc. On September 29, 1949, the Soviet Union denounced its 1945 treaty of friendship with Yugoslavia. On June 20, 1956, however, following a visit by Tito to Moscow, the U.S.S.R. and Yugoslavia signed a pact renewing friendship.

The 1919 components of Yugoslavia were the old kingdoms of Serbia and Montenegro, and the following: Bosnia-Herzegovina, formerly administered jointly by Austria and Hungary; Croatia-Slavonia, which had had limited autonomy under Hungary; and Slovenia and Dalmatia, formerly administered by Austria.

Alexander I, son of King Peter of Serbia, became the first King of the new country on Aug. 16, 1921. His reign was a rocky one because the Croats, under Dr. Stjepan Radić, unceasingly sought autonomy. Finally, a Croat assassinated Alexander in Marseille in October 1934, and since his son Peter was a minor, a regency was set up under Prince Paul, the new King's uncle.

After pursuing an increasingly pro-Axis policy under the regent, Yugoslavia signed the Axis Pact on March 25, 1941; this caused the overthrow of the government two days later. On April 6 the country was invaded by the Nazis and was speedily occupied. While the King and government fled to the Near East and later to London, Yugoslavia was divided into German, Italian, Hungarian and Bulgarian occupation zones. Puppet regimes were established in Croatia and Serbia.

Inside Yugoslavia, the Axis occupation was fought by two guerrilla armies—the Chetniks under Draža Mihailović, who supported the monarchy; and the Partisans under Marshal Tito (Josip Broz), who leaned toward Russia. These two groups fought not only the Germans, but also each other. In November 1943, Tito established an Executive National Committee of Liberation to act as a provisional government.



ment, thus repudiating King Peter, who was in exile.

In the elections of Nov. 11, 1945, Tito's forces won overwhelmingly, partly because the monarchist factions boycotted the balloting. Convening on Nov. 29, the new Assembly abolished the monarchy and set up the Federal People's Republic of Yugoslavia. Tito was Prime Minister, and his government won recognition from Britain and the United States.

The Tito government embarked upon an internal policy of ruthless oppression and elimination of opposition factions, including the summary trial and execution of Mikhailovic in 1946. In April 1947, it initiated a five-year plan aimed at improvement of agriculture and heavy expansion of industry.

Externally the government pursued, until 1948, its uncompromising support of Moscow, as manifested by Yugoslav aid to antigovernment Greek guerrillas, which had led to a U. N. inquiry in 1947. Soviet support enabled the nation to secure most of Italian Istria under the 1947 peace treaty, but efforts to secure sovereignty over the key port of Trieste were unsuccessful. Zone B of the former free territory of Trieste was, however, transferred to Yugoslavia in Oct. 1954.

Tito was elected President of Yugoslavia under the new Constitution on Jan. 14, 1953.

**GOVERNMENT AND DEFENSE.** Under the 1953 Constitution, Yugoslavia is a federal republic composed of six units—Serbia which includes the autonomous province of Vojvodina and the autonomous region of Kosovo-Metohija), Croatia, Slovenia, Bosnia-Herzegovina, Macedonia and Montenegro. Executive power is vested in the Federal Executive Council of 30 to 45 members elected by and from the Federal Assembly, and presided over by the President of the republic, who is elected by and is responsible to the Federal Assembly. The Assembly consists of (1) a Federal Council of 352 members, most of whom are popularly elected and (2) a Council of Producers, elected by organized producing citizens in agriculture, industry and the crafts. Actual administration is carried on by 5 State Secretaries responsible to the Executive Council. Actual control of the country remains with the Yugoslav Communist party.

The army, based upon the National Liberation Army and partisan detachments which at one time had a strength of about 1,000,000, was unofficially estimated to number approximately 600,000 in 1954, including police forces. Equipment generally is poor. The air force had about 600 planes in 1950. The navy was believed to include submarines and 4 escort vessels in Dec.

1955. It received several small ships from the Italian fleet in 1948.

**SOCIAL AND ECONOMIC CONDITIONS.** Education on the elementary level is compulsory and free. Illiteracy (10 years and over) was 25% in 1953. In 1953-54 there were 14,044 elementary schools with 1,402,000 pupils, 2,106 secondary schools with 523,000 pupils and 1,074 technical schools with 140,000 students. The various universities and technical colleges had a total enrollment of 59,571 in 1953-54.

Agriculture occupies about 80 per cent of the population. The principal crops are corn, wheat, sugar beets, hemp, hops, opium (in Macedonia) and tobacco (chiefly in Macedonia and Herzegovina). Excellent wines are produced in Dalmatia and Herzegovina and along the Danube. Recent crop production data are as follows, in thousands of metric tons:

	1953	1954	1955*
Wheat	2,517	1,385	2,438
Maize	3,840	3,004	3,900
Sugar beets	1,514	1,249	1,380
Potatoes	2,096	1,876	2,260
Tobacco	30	29	42

\* Provisional.

In 1955 there were 5,300,000 cattle, 12,000,000 sheep and 4,800,000 hogs. Wool production in 1955 was 10,000 metric tons, clean basis.

Manufactures are limited for the most part to consumers' goods. Legislation passed Dec. 5, 1946, nationalized all private economic enterprises, public works and industries in 42 branches of the national economy including mining, metallurgy, and all industries which process natural products.

Yugoslavia has only limited access to ports on the Adriatic because of the difficulty in crossing the coastal range with railways and highways. Waterways, especially the Danube, are important. The merchant marine in 1955 totaled 166 vessels (of over 100 tons) with a gross tonnage of 300,412. Railway mileage in 1953 was 7,327 and highway mileage in 1952 was 51,650.

Recent trade data are as follows (in billions of dinars):

	1953	1954	1955
Exports	55.79	72.11	76.98
Imports*	118.59	101.82	132.29

\* Including imports in aid.

Chief exports in 1955 were sawn timber (13%), tobacco (6%) and pulpwood (3%). Leading customers were Italy (15%), western Germany (14%) and the U. S. (11%); leading suppliers, the U. S. (33%), western Germany (13%) and Britain (5%). Imports in aid totaled 34,195,964,000 dinars in 1955.

The 1956 budget balanced revenue and expenditure at 212,500,000,000 dinars.

**NATURAL FEATURES AND RESOURCES; CLIMATE.** About half of Yugoslavia is mountainous. In the north, the Dinaric Alps rise abruptly from the sea and progress eastward as a barren limestone plateau called the Karst. Montenegro is a jumbled mass of mountains, containing also some grassy slopes and fertile river valleys. Southern Serbia, too, is mountainous. A rich plain in the north and northeast, drained by the Danube, is the most fertile area of the country. The Danube and tributaries—the Drava, Sava and Morava—in the northeast are the principal rivers.

Yugoslavia is the Balkans' principal mineral producer. Production in 1955 was as follows, in metric tons: coal, 8,819,000; lignite, 6,388,000; blister copper, 28,200; iron ore, 1,398,200; chromite, 126,200; bauxite, 791,000; manganese, 10,900; refined lead, 75,600; raw zinc, 13,700; silver, 291,000 oz. Uranium deposits have been reported.

On the Adriatic, Yugoslavia's climate is mild and Mediterranean, but in the interior the winters are cold and the summers hot. January temperatures in Belgrade average about 30°, and summer temperatures are usually in the 70's. Rainfall is heaviest throughout the country from October to January.

A record of later events may be found in the section: **NEWS RECORD of 1956.**

## PRINCIPAL DESERTS OF THE WORLD

Desert	Location	Approximate size	Appx. elevation, ft.
Atacama.....	North Chile.....	400 mi. long.....	7,000-13,500
Black Rock.....	Northwest Nevada.....	70 mi. long and in places 20 mi. wide, or about 1,000 sq. mi.	2,000-5,000
Colorado.....	Southeast California from San Geronio Pass to Gulf of California	200 mi. long and a maximum width of 50 mi.....	Few feet above about 250 below sea level
Dasht-i-Kavir.....	Southeast of Caspian Sea in Iran...	.....	2,000
Dasht-i-Lut.....	Northeast of Kerman in Iran.....	.....	1,000
Gobi (Shamo or "Desert of Sand")	Covers most of Mongolia.....	800 by 400 mi., or at least 300,000 sq. mi.	3,000-5,000
Great Arabian.....	Most of Arabia.....	1,500 mi. long.....	.....
Syrian (El Hamad)	North of 30° N. Latitude.....	.....	1,850
Nefud (Red Desert)	South of Jauf.....	400 mi. long and average of 200 mi. wide.....	3,000
Duhna	Southeast of Nefud.....	400 by 30 mi.....	.....
Rub' al Khali.....	South portion of Nejd.....	.....	.....
Great Australian.....	Western portion of Australia.....	About one-half the continent	600-1,000
(Includes: Great Sandy; Gibson; Great Victoria; Arunta.)			
Great Salt Lake.....	West of Great Salt Lake to Nevada-Utah line.	80 by 50 mi.....	4,500
Kalahari.....	South Africa between the Orange and Zambezi Rivers	400 by 600 mi., or about 120,000 sq. mi.....	Over 3,000
Kara Kum (Desert of Khiva or "Black Sands")	Southwest Turkestan south of Lake Aral	110,000 sq. mi.....	.....
Kizil Kum.....	Central Turkestan southeast of Lake Aral	370 by 220 mi., or about 70,000 sq. mi.....	160 near Lake Aral
Mohave.....	North of Colorado Desert and south of Death Valley in southeast California	15,000 sq. mi.....	2,000
Painted Desert.....	Northeast Arizona.....	75 mi. wide.....	High plateau 5,000
Sahara.....	Northern states of Africa to about 15° N. Lat. and from Red Sea to the Atlantic Ocean	3,200 mi. greatest length along 20° N. Lat.; width varies from 300 to 1,400 mi. Area over 3,500,000 sq. mi.	440 below sea level
Libyan.....	East portion of the Sahara west of Nile	More than 500,000 sq. mi.....	11,000 above with average elevation 1,400-1,600
Nubian.....	From Red Sea to great west bend of the Nile	.....	2,500
Takla Makan.....	S. Central Sinkiang in Tarim Basin	700 mi. long.....	.....
Thar (Indian).....	Chiefly Rajputana, India.....	About 300 mi. by 380 mi.....	About 500

## Explorations and Discoveries

## Africa

Country or place	Event	Explorer or discoverer	Date
Sierra Leone	Visited	Hanno, Carthaginian seaman	c. 520 B.C.
Congo River	Mouth discovered	Cão, Portuguese navigator	c. A.D. 1484
Cape of Good Hope	Doubled	Bartholomeu Diaz, Portuguese navigator	1488
Gambia River	Explored	Mungo Park, Scottish explorer	1795
Sahara Desert	Crossed	Denham and Clapperton, English explorers	1822-23
Zambezi River	Discovered	Livingstone, Scottish explorer	1851
Sudan	Explored	Barth, German explorer	1852-55
Victoria Falls	Discovered	Livingstone	1855
Lake Tanganyika	Discovered	Burton and Speke, British explorers	1858
Congo River	Traced	Stanley, British explorer	1877

## Asia

Punjab (India)	Visited	Alexander the Great	327 B.C.
China	Visited	Marco Polo, Italian traveler	c. A.D. 1272
Tibet	Visited	Odoric, Italian monk	c. 1325
Southern China	Explored	Conti, Italian adventurer	c. 1440
India	Visited by Cape route	Vasco da Gama, Portuguese navigator	1498
Japan	Visited	St. Francis Xavier of Spain	1549
Arabia	Explored	Niebuhr, German explorer	1762
China	Explored	Richthofen, German scientist	1868
Mongolia	Explored	Przhevalsky, Russian explorer	1870-73
Central Asia	Explored	Hedin, Swedish scientist	1890-1908

## Europe

Shetland Islands	Visited	Pytheas of Massilia (Marseille)	c. 325 B.C.
North Cape	Rounded	Ottar, Norwegian explorer	c. A.D. 870
Iceland	Colonized	Norwegian noblemen	c. 890-900

## North America

Greenland	Colonized	Eric the Red, Norwegian navigator	c. A.D. 985
Labrador; Nova Scotia (?)	Discovered	Leif Ericsson, Norse explorer	1000
West Indies	Discovered	Christopher Columbus, Italian navigator	1492
North America	Coast discovered	John Cabot, for British	1497
Pacific Ocean	Discovered	Balboa, Spanish explorer	1513
Florida	Explored	Ponce de León, Spanish explorer	1513
Mexico	Conquered	Cortez, Spanish adventurer	1519
St. Lawrence River	Discovered	Cartier, French navigator	1534
Southwest U. S.	Explored	Coronado, Spanish explorer	1540-42
Colorado River	Discovered	Alarcón, Spanish explorer	1540
Mississippi River	Discovered	Hernando de Soto, Spanish explorer	1541
Frobisher Bay	Discovered	Frobisher, English seaman	1576
Maine Coast	Explored	Champlain, French explorer	1604
Jamestown, Va.	Settled	Smith, English colonist	1607
Hudson River	Explored	Hudson, English navigator	1609
Hudson Bay (Canada)	Discovered	Hudson	1610
Baffin Bay	Discovered	Baffin, English navigator	1616
Lake Michigan	Navigated	Nicolet, French explorer	1634
Arkansas River	Discovered	Marquette and Joliet, French explorers	1673
Mississippi River	Explored	LaSalle, French explorer	1682
Bering Strait	Discovered	Bering, Danish explorer	1728
Alaskan Coast	Sighted	Gvosdeff, Russian sailor	1731
Mackenzie River (Canada)	Discovered	Mackenzie, Scottish-Canadian explorer	1789
Northwest U. S.	Explored	Lewis and Clark	1804-06
Northeast Passage (Arctic Ocean)	Navigated	Nordenskiöld, Swedish explorer	1879
Greenland	Explored	Peary, American explorer	1892
Northwest Passage	Navigated	Amundsen, Norwegian explorer	1906



## South America

Country or place	Event	Explorer or discoverer	Date
Continent	Visited	Columbus, Italian navigator	1492
Brazil	Discovered	Cabral, Portuguese explorer	1500
Peru	Conquered	Pizarro, Spanish explorer	1532-3
Amazon River	Explored	Orellana, Spanish explorer	1540
Cape Horn	Discovered	Schouten, Dutch navigator	1615

## Oceania

New Guinea	Visited	Menezes, Portuguese explorer	1526
Australia	Visited	Jansz, Dutch explorer	1605
Tasmania	Visited	Tasman, Dutch navigator	1642
Australia	Explored	Sturt, English explorer	1828
Australia	Explored	Burke and Wills, Australian explorers	1860

## Arctic, Antarctic and Miscellaneous

Ocean exploration	Expedition	Magellan's ships circumnavigated the globe	1519-22
Spitsbergen	Visited	Barents, Dutch navigator	1596
(Arctic Europe)			
Antarctic Circle	Crossed	Cook, English navigator	1771
Antarctica	Discovered	Palmer, U S. explorer (archipelago) and Bellingshausen, Russian navigator (mainland)	1820-2
Antarctica	Explored	Wilkes, American explorer	1840
North Pole	Discovered	Peary, American explorer	1908
South Pole	Discovered	Amundsen, Norwegian explorer	1911

## The Seven Wonders of the World

## THE PYRAMIDS OF EGYPT

A group of three pyramids, *Khufu*, *Khafra* and *Menkaura* at Giza, outside modern Cairo, is often called the first wonder of the world; it is also the oldest and only surviving "wonder." The largest pyramid, built by Khufu (Cheops), had an original estimated height of 482 ft. (now approximately 450 ft.). The exact date of its construction is unknown and has been estimated as early as 4700 B.C. but is probably closer to 2900 B.C.

## HANGING GARDENS OF BABYLON

Often listed as the second wonder, these gardens were supposedly built by Nebuchadnezzar about 600 B.C. to please his queen, Amuhia. They are also associated with the mythical Assyrian Queen, Semiramis. Archeologists surmise that the gardens were laid out atop a vaulted building, with provisions for raising water. The terraces were said to rise from 75 to 300 ft.

The Walls of Babylon, also built by Nebuchadnezzar, are sometimes referred to as the second (or the seventh) wonder instead of the Hanging Gardens.

STATUE OF ZEUS (JUPITER)  
AT OLYMPIA

The work of Phidias (5th century B.C.), this colossal figure in gold and ivory was reputedly 40 ft. high. All trace of it is lost, except for reproductions on coins.

TEMPLE OF ARTEMIS (DIANA)  
AT EPHEBUS

A beautiful structure, begun about 350 B.C. in honor of a non-Hellenic goddess who later became identified with the Greek goddess of the same name. The temple, with Ionic columns 60 feet high, was destroyed by invading Goths A.D. 262.

## MAUSOLEUM AT HALICARNASSUS

This famous monument was erected in Queen Artemisia in memory of her husband, King Mausolus of Caria in Asia Minor, who died in 353 B.C. Some remains of the structure are in the British Museum. This shrine is the source of the modern word "mausoleum."

## COLOSSUS AT RHODES

This bronze statue of Helios (Apollo) about 105 ft. high, was the work of the sculptor Chares, who reputedly labored for 12 years before completing it in 280 B.C. It was destroyed during an earthquake in 224 B.C.

## PHAROS OF ALEXANDRIA

The seventh wonder was the Pharos (lighthouse) of Alexandria, built by Sostratus of Cnidus during the 3rd century B.C. on the island of Pharos off the coast of Egypt. It was destroyed by an earthquake in the 13th century.

Area	Estimated population, in thousands, 1955	Approximate area, in thousands of sq. mi.	Per cent of total land area	Population density per sq. mi.	Highest	Elevation, feet	Lowest	Dimensions, miles East-West North-South
<b>WORLD</b>	2,644,840	58,327	100.0	45.3	Mt. Everest, Asia, 29,028	Dead Sea, Asia, below sea level	Dead Sea, Asia, 1,290 below sea level	24,902 24,860
<b>ASIA, excluding Asiatic U.S.S.R.; including Philippines and Indonesia</b>	1,440,819	10,588	18.1	136.1	Mt. Everest, Tibet-Nepal, 29,028	Dead Sea, Palestine-Jordan, 1,290 below sea level	Dead Sea, Palestine-Jordan, 1,290 below sea level	5,400* 5,300*
<b>AFRICA</b>	215,750	11,685	20.0	18.5	Mt. Kilimanjaro, Tanganyika, 19,565	Qattara Depression, Egypt, 440 below sea level	Qattara Depression, Egypt, 440 below sea level	4,600 5,000
<b>NORTH AMERICA</b>	234,653	9,355	16.0	25.1	Mt. McKinley, Alaska, 20,300	Death Valley, Calif., 275 below sea level	Death Valley, Calif., 275 below sea level	3,200 4,000
<b>SOUTH AMERICA</b>	123,586	6,892	11.8	17.9	Mt. Aconcagua, Argentina, 22,835	Sea level	Sea level	3,200 4,600
<b>ANTARCTICA</b>	Uninhabited	6,000	10.3	...	Mt. Thorvald Nilson, 15,400	Sea level	Sea level	3,300† 2,400†
<b>EUROPE, including Iceland; excluding European U.S.S.R.</b>	405,994	1,903	3.3	213.4	Mt. Blanc, France, 15,781	Sea level	Sea level	2,400 1,900
<b>AUSTRALIA</b>	8,987	2,975	5.1	3.1	Mt. Kosciusko, 7,328	Lake Eyre, 38 below sea level	Lake Eyre, 38 below sea level	2,400 1,900
<b>OCEANIA, incl. New Zealand and British, U. S., French and Australian territories, possessions, etc.</b>	5,311	330	.6	16.1	Mauna Kea, Hawaii, 13,784	Sea level	Sea level	2,400 1,900
<b>U.S.S.R.</b>	209,700	8,599	14.8	24.4	Mt. Pobedy, 24,409	Caspian Sea, 86 below sea level	Caspian Sea, 86 below sea level	5,000 2,500

\* Including Asiatic U.S.S.R. † Including European U.S.S.R.

## HIGH POPULATION DENSITIES (per square mile)

	Japan	United Kingdom	Germany (East)	Germany (West)	Korea	335.4
Monaco	34,240.7	867.0	531.7	355.3	Luxembourg	319.3
Netherlands	867.0	531.7	355.3	339.2	Haiti	316.3
Maldives Islands	756.5	413.6	339.2	339.2	Switzerland	313.9
Belgium	755.3	413.6	339.2	339.2		

## Representative Mountain Peaks of the World

Mountain peak	Range	Location	Height, feet
Everest	Himalayas	Tibet-Nepal	29,000
Godwin Austen (K2)	Karakoram	India	28,200
Kanchenjunga	Himalayas	Nepal	28,100
Makalu	Himalayas	Tibet-Nepal	27,700
Dhaulagari	Himalayas	Nepal	26,700
Gurla Mandhata	Himalayas	Tibet	25,200
Tirich Mir	Hindu Kush	Pakistan	25,200
Muztagh Ata (K5)	Pamirs	Sinkiang	24,800
Muztagh	Kunlun	Sinkiang	23,800
Aconcagua	Andes	Argentina	22,800
Dos Conos	Andes	Argentina	22,500
Ojos del Salado	Andes	Argentina-Chile	22,400
Huascarán	Andes	Peru	22,200
Llullaillaco	Andes	Argentina-Chile	22,100
Kailas	Himalayas	Tibet	22,000
Mercedario	Andes	Argentina	21,800
Tupungato	Andes	Argentina-Chile	21,400
Sajama	Andes	Bolivia	21,300
Chimborazo	Andes	Ecuador	20,500
McKinley	Alaska	Alaska	20,300
Logan	St. Elias	Canada (Yukon Territory)	19,800
Kilimanjaro	.....	Tanganyika	19,500
Cotopaxi	Andes	Ecuador	19,300
Cayambe	Andes	Ecuador	19,100
Misti	Andes	Peru	19,100
Orizaba (Citlaltepētl)	Sierra Madre Oriental	Mexico	18,600
Elbrus	Caucasus	U.S.S.R.	18,400
St. Elias	St. Elias	Alaska-Canada	18,000
Vilcanota	Andes	Peru	17,900
Popocatepetl	Cordillera de Anáhuac	Mexico	17,800
Cerro de Cuz	Andes	Bolivia	17,800
Ixtaccihuatl	Cordillera de Anáhuac	Mexico	17,300
Tolima	Andes	Colombia	17,100
Dikh-Tau	Caucasus	U.S.S.R.	17,000
Kenya	.....	Kenya	17,000
Ruwenzori	Ruwenzori	Belgian Congo-Uganda	16,700
Kazbek	Caucasus	U.S.S.R.	16,500
Bona	Wrangell	Alaska	16,400
Klyuchevskaya	Kamchatka	U.S.S.R.	15,900
Savalan	Elburz	Iran	15,700
Blanc	Alps	France	15,700
Lister	.....	Antarctica	15,300
Fairweather	St. Elias	Alaska	15,200
Dashan	Simen	Ethiopia	15,100
Markham	.....	Antarctica	15,100
Matterhorn	Alps	Switzerland-Italy	14,700
Whitney	Sierra Nevada	California	14,400
Elbert	Rockies	Colorado	14,400
Massive	Rockies	Colorado	14,400
Rainier	Cascades	Washington	14,400
Longs	Rockies	Colorado	14,200
Collma	Sierra Madre Occidental	Mexico	14,200
Shasta	Sierra Nevada	California	14,100
Pikes Peak	Rockies	Colorado	14,100
Finsteraarhorn	Alps	Switzerland	14,000
Gannett Peak	Rockies	Wyoming	13,700
Mauna Loa	.....	Hawaii	13,600
Jungfrau	Alps	Switzerland	13,600
Cameroon	.....	British Cameroons	13,300
Erebus	.....	Antarctica	13,200
Robson	Rockies	British Columbia	12,900
Fujiyama (Fujisan)	.....	Japan	12,300
Cook	Southern Alps	South Island, New Zealand	12,300
Hood	Cascades	Oregon	11,200



## Large Islands of the World

Island and status	Location	Area, sq. mi.
GREENLAND (Danish territory)	North Atlantic	839,782
NEW GUINEA (Under Dutch crown, west part; U. N. trust territory under Australian administration, northeast part; Australian territory, southeast part)	Southwest Pacific	812,329
BORNEO (United States of Indonesia, south part; British protectorate and colonies, north part)	South China Sea	290,012
REUNION (French overseas territory)	Off southeast coast of Africa	227,737
FINLAND (Canada, Northwest Territories)	Arctic	201,600
INDONESIA (United States of Indonesia)	Northeast Indian Ocean	163,145
OKINAWA (Japanese home island)	Sea of Japan—Pacific	91,278
GREAT BRITAIN (Eng., Scotland, Wales)	Off coast of northwest Europe	88,140
YUKON (Canada, Northwest Territories)	Arctic	80,450
ALASKA (Canada, Northwest Territories)	Arctic Ocean	75,024
CELEBES (United States of Indonesia)	Southwest Pacific	69,255
SOUTH ISLAND, NEW ZEALAND	South Pacific	58,093
JAVA (United States of Indonesia)	Northeast Indian Ocean	48,504
NORTH ISLAND, NEW ZEALAND	South Pacific	44,281
NEWFOUNDLAND (Canadian province)	North Atlantic	42,734
CUBA (Republic)	Caribbean Sea	42,350
PHILIPPINES (Republic)	Philippine Islands	40,814
IRELAND (Republic)	North Atlantic	39,688
INDONESIA	Philippine Islands	36,537
OKKAIKAI (Japanese home island)	Sea of Japan—Pacific	34,084
IRELAND (Ireland, republic, south part; Northern Ireland, part of United Kingdom)	West of Great Britain	31,840
DOMINICAN REPUBLIC (Dominican Republic, east part; Haitian republic, west part)	Caribbean Sea	30,075
WESTERN AUSTRALIA (Australian state)	South of Australia	26,215
YUKON (Canada, Northwest Territories)	Arctic	25,992
YUKON (Member of Commonwealth of Nations)	Indian Ocean	25,332
KHALIN (U.S.S.R.)	North of Japan	24,560
YUKON (Canada, Northwest Territories)	Arctic	20,484
ERRA DEL FUEGO (East part to Argentina; west part to Chile)	Southern tip of South America	18,530
ALASKA (Canada, Northwest Territories)	Arctic	16,164
YUKON (Canada, N. W. Territories)	Hudson Bay	16,114

## Oceans and Seas

Name	Area, sq. mi.	Average depth, feet	Greatest known depth, ft.	Place of greatest known depth
Atlantic Ocean	63,801,700	14,048	35,400	Off Mindanao
Indian Ocean	31,830,800	12,880	30,246	Off Puerto Rico
Pacific Ocean	28,356,300	13,002	22,968	Off Sumatra-Java
Arctic Ocean	5,440,200	3,953	17,850	77° 45' N.; 175° W.
Mediterranean Sea*	1,145,100	4,688	15,564	Off Cape Matapan, Greece
Caribbean Sea	1,049,500	8,685	22,788	Off Cayman Islands
South China Sea	895,400	5,419	18,090	West of Luzon
Yellow Sea	875,800	4,714	13,422	Off Buldir Island
Gulf of Mexico	618,200	4,874	12,744	Sigsbee Deep
Chukotka Sea	589,800	2,749	11,400	146° 10' E.; 46° 50' N.
East China Sea	482,300	617	9,126	25° 16' N.; 125° E.
Hudson Bay	475,800	420	600	Near entrance
Sea of Japan	389,100	4,429	12,276	Central Basin
Adaman Sea	308,000	2,854	12,392	Off Car Nicobar Island
North Sea	222,100	308	2,165	Skagerrak
Red Sea	169,100	1,611	7,254	Off Port Sudan
Arctic Sea	163,000	180	1,380	Off Gottland

\*Including Black Sea and Sea of Azov. NOTE: For Caspian Sea, see Large Lakes of World elsewhere in this book.

## Famous Waterfalls of the World

Waterfall	Location	River	Height,
Angel	Venezuela	Tributary of Caroni	3,120
Cuquenán, or Kukenaam	Venezuela-British Guiana	Cuquenán	2,100
Sutherland	South Island, N. Z.	Arthur	1,000
Tugela	Natal, South Africa	Tugela	1,000
Ribbon (Yosemite)	California	Creek, flowing into Yosemite	1,000
Upper Yosemite	California	Yosemite Creek, tributary of Merced	1,000
Gavarnie	Southwestern France	Gave de Pau	1,000
Takkakaw	British Columbia	Tributary of Yoho	1,000
Widow's Tears (Yosemite)	California	Tributary of Merced	1,000
Staubbach	Switzerland	Staubbach (Lauterbrunnen valley)	1,000
Trummelbach	Switzerland	Trummelbach (Lauterbrunnen)	1,000
Middle Cascade (Yosemite)	California	Yosemite Creek, tributary of Merced	1,000
Multnomah	Oregon	Multnomah Creek, tributary of Columbia	1,000
Vettisfos	Norway	Morkedöla	1,000
King Edward VII	British Guiana	Courantyne	1,000
Gersoppa	India	Sharavati	1,000
Kaeteur	British Guiana	Pataro	1,000
Kalambo	Tanganyika-N. Rhodesia	.....	1,000
Fairy (Mt. Rainier Park)	Washington	Stevens Creek	1,000
Maradalsfos	Norway	Stream flowing into Ejkisdalsvand (lake)	1,000
Skykkjefos	Norway	In Skykkjedal (valley) of Inner Hardanger Fiord	1,000
Terni	Italy	Velino, tributary of Nera	1,000
Maletsunyane (Le Bihan)	Basutoland, Africa	Maletsunyane	1,000
Bridal Veil (Yosemite)	California	Bridal Veil Creek, tributary of Merced	1,000
Nevada (Yosemite)	California	Merced	1,000
Voringfos	Norway	Bjoreia	1,000
Skjaeggedalsfos	Norway	Tyssaa	1,000
Marina	British Guiana	Tributary of Kuribrong, a tributary of the Pataro	1,000
Tequendama	Colombia	Bogotá	1,000
King George's	Cape Province, South Africa	Orange	1,000
Herval Cascades	Brazil	.....	1,000
Guayra	Paraguay-Brazil	Paraná	1,000
Illilouette (Yosemite)	California	Illilouette Creek, tributary of Merced	1,000
Granite (Mt. Rainier Park)	Washington	Granite Creek	1,000
Splendor of Sun	Nikko, Japan	.....	1,000
Victoria	Southern Rhodesia	Zambezi	1,000
Comet (Mt. Rainier Park)	Washington	Van Trump Creek	1,000
Lower Yosemite	California	Yosemite Creek	1,000
Vernal (Yosemite)	California	Merced	1,000
Virginia	Northwest Territories, Canada	South Nahanni, tributary of Mackenzie	1,000
Lower Yellowstone	Wyoming	Yellowstone	1,000
Grand	Labrador, Canada	Hamilton	1,000
Sluiskin (Mt. Rainier Park)	Washington	Paradise	1,000
Snoqualmie	Washington	Snoqualmie	1,000
Seven Falls	Colorado	.....	1,000
Tallulah	Georgia	Tallulah	1,000
Shoshone	Idaho	Snake	1,000
Narada (Mt. Rainier Park)	Washington	Paradise	1,000
Niagara	New York-Ontario	Niagara	1,000
Tower (Yellowstone)	Wyoming	Tower Creek, tributary of Yellowstone	1,000

# Principal Rivers of the World

River	Source	Outflow	Approx. length, miles
ile	Lake Victoria	Mediterranean Sea	4,160
mazon	Glacier-fed lakes, Peru	Atlantic Ocean	3,900
Missouri-Mississippi	Source of Red Rock Creek, Montana	Gulf of Mexico	3,891
b	Altai Mts., U.S.S.R.	Gulf of Ob	3,200
angtze Kiang	Tibetan plateau	China Sea	3,100
mur	Confluence of Shilka (U.S.S.R.) and Argun (Manchuria) Rivers	Tartary Strait	2,900
ongo	Between Lakes Nyasa and Tanganyika	Atlantic Ocean	2,900
ena	Baikal Mts., U.S.S.R.	Arctic Ocean	2,800
enisei	Tannu Ola Mountains, western Mongolia	Arctic Ocean	2,800
wang Ho (Yellow)	East part of Kunlun Mts., west China	Gulf of Chihli	2,700
iger	Border of Sierra Leone	Gulf of Guinea	2,600
ackenzie	Head of Finlay River, British Columbia	Beaufort Sea (Arctic Ocean)	2,514
ékong	Tibetan highlands	South China Sea	2,500
Missouri	Actual headwaters Red Rock Creek; beginning of Missouri at confluence of Gallatin, Madison, Jefferson Rivers	Mississippi River	2,475 (confluence) 2,723 (headwaters)
Mississippi	Lake Itasca, Minnesota	Gulf of Mexico	2,470
araná	Confluence of Paranaíba and Grande Rivers, southeast Brazil	Río de la Plata (Atlantic Ocean)	2,450
urray	Australian Alps, New South Wales	Indian (Southern) Ocean	2,310
ish	Altai Mts., U.S.S.R.	Ob River	2,300
olga	Valdai plateau, U.S.S.R.	Caspian Sea	2,300
adeira	Confluence of Gauporé and Maumoré Rivers, Bolivia-Brazil border	Amazon River	2,000
t. Lawrence	St. Louis River, Minn.	Gulf of St. Lawrence	1,900
urús	Southwest Amazonas, Brazil	Amazon River	1,850
o Grande	San Juan Mts., Colorado	Gulf of Mexico	1,800
o Francisco	Southwest Minas Geraes, Brazil	Atlantic Ocean	1,800
ukon	Junction of Lewes and Pelly, Yukon Territory	Bering Sea	1,800
alween	Tibet, south of Kunlun Mountains	Gulf of Martaban	1,750
anube	Black Forest, Germany	Black Sea	1,725
phrates	Dumlu Dag (mountains), Turkey	Persian Gulf	1,700
adus	Himalayas	Arabian Sea	1,700
rinoco	Sierra Parima on Venezuela-Brazil boundary	Atlantic Ocean	1,700
pcantins	Near Pyrenopolis, southeast Brazil	Pará River (Atlantic Ocean)	1,700
rahmaputra	Himalayas	Ganges River (Bay of Bengal)	1,680
a Kiang	Plateau of Yunnan, southwest China	China Sea	1,650
elson	Head of Bow River, west Alberta, Canada	Hudson Bay	1,600
ambezi	11°21'S.; 24°22'E., Northern Rhodesia, Africa	Indian Ocean	1,600
anges	Himalayas	Bay of Bengal	1,540
mu Darya (Oxus)	Nicholas Range, Pamir Mountains, U.S.S.R.	Lake Aral	1,500



River	Source	Outflow	Approx. length miles
Paraguay	Mato Grosso, Brazil	Paraná River	1,500
Yapurá	Andes, Colombia	Amazon River	1,500
Arkansas	Central Colorado	Mississippi River	1,450
Colorado	Middle Park, northern Colorado	Gulf of California	1,440
Dnieper	Valdai Hills, U.S.S.R.	Black Sea	1,400
Negro	Watershed between Ori- noco and Amazon	Amazon River	1,400
Ural	Southern Ural Moun- tains, U.S.S.R.	Caspian Sea	1,400
Ohio-Allegheny	Plateau in Potter County, Pa.	Mississippi River	1,306
Orange	Basutoland, Africa	Atlantic Ocean	1,300
Irrawaddy	Confluence of N'mai and Mali Rivers, northeast Burma	Bay of Bengal	1,250
Columbia	Columbia Lake, British Columbia	Pacific Ocean	1,214
Saskatchewan	Western Alberta, Canada	Lake Winnipeg	1,205
Darling	Central part of Eastern Highlands, Australia	Murray River	1,160
Tigris	Taurus Mts., Turkey	Euphrates River (Persian Gulf)	1,150
Sungari	Sungari Reservoir, Manchuria, China	Amur River	1,130
Don	Lake Ivan, U.S.S.R.	Sea of Azov	1,100

### Large Lakes of the World

Name and location	Area, sq. mi.	Length, miles	Maximum depth, feet	Elevation above level, ft.
Caspian, U.S.S.R.-Iran†	169,300	795	3,612	-8
Superior, U. S. A.-Canada	31,820	383	1,302	625
Victoria, East Central Africa	26,828	250	270	3,711
Aral, U.S.S.R.	26,233	280	222	15
Huron, U. S. A.-Canada	23,010	206	750	58
Michigan, U. S. A.	22,400	321	923	58
Baikal, U.S.S.R.	13,300	385	5,413	1,511
Tanganyika, East Central Africa	12,700	420	4,708	2,538
Great Bear, Canada	12,000	195	270*	39
Great Slave, Canada	11,170	325	—	49
Nyasa, Southern Africa	11,000	350	2,580	1,655
Erie, U. S. A.-Canada	9,940	241	210	57
Winnipeg, Canada	9,398	260	70	71
Ontario, U. S. A.-Canada	7,540	193	778	24
Balkhash, U.S.S.R.	7,115	430	36	90
Ladoga, U.S.S.R.	7,000	125	730	5
Onega, U.S.S.R.	3,764	145	408	12
Rudolf, Eastern Africa	3,475	185	—	1,25
Titicaca, Bolivia-Peru	3,200	125	892	12,50
Nicaragua, Nicaragua	3,089	110	200	13
Athabaska, Canada	3,058	195	—	69
Reindeer, Canada	2,444	155	—	1,15
Issyk-Kul, U.S.S.R.	2,230	115	2,300	5,40
Koko Nor, China	2,200	66	—	10,00
Vänern, Sweden	2,143	87	292	14
Winnipegosis, Canada	2,086	122	38	83
Bangweulu, East Central Africa	1,900	60	15	3,70
Nipigon, Canada	1,870	70	—	85
Manitoba, Canada	1,817	120	12*	81
Urmia, Iran	1,750*	80-90	50	4,18
Albert, Uganda, Africa	1,640	100	50	2,03
Dubawnt, Canada	1,600	65	—	50
Great Salt, U. S. A.	1,500	75	15-25*	4,21
Van, Turkey	1,453	80	—	5,64

\* Average. † The name Caspian Sea is a misnomer; it is a land-locked lake, so classified by oceanographers.

## Volcanoes of the Earth

There are approximately 430 volcanoes 275 in the Northern Hemisphere and 155 in the Southern) with recorded eruptions in historical times. Of the 2,500 recorded eruptions, more than 2,000 have taken place in the Pacific area. Of known active volcanoes, about 80 are of the submarine type.

### ATLANTIC-INDIAN AREA

#### Mediterranean Region

*Italy:* Mt. Vesuvius, southeast of Naples (3,858 ft.). Only active volcano on mainland of Europe. Pompeii buried by an eruption, A.D. 79. Latest eruption in 1944.

*Sicily:* Mt. Etna, eastern Sicily (10,741 ft.). Two new craters formed in eruptions of Feb.-Mar., 1947. Worst eruption in 50 years occurred Nov., 1950-Jan., 1951.

*Lipari Islands* (north of Sicily): Stromboli (about 3,000 ft.). Called "Lighthouse of the Mediterranean." Erupted 1956.

#### Atlantic Area

*Canary Islands:* Pico de Teide (Tenerife), on island of Tenerife (12,192 ft.).

*Cape Verde Islands:* Fogo (over 8,000 ft.). Latest eruption in 1857; last until 1951.

*Iceland:* At least 25 volcanoes active in historical times. These volcanoes very similar to those in Hawaii.

*Hekla* (4,747 ft.). Several craters, largest about 1 1/4 mi. in circumference. Most recent eruptions reported in 1947-48.

*Skaptarjökull.* Series of volcanoes near Skaptar; erupted in 1783 with large loss of life and produced largest known single output of lava.

*Askja* (4,600 ft.). Largest in Iceland.

*Jan Mayen Island:* Beerenberg, northern part of island (over 8,000 ft.). Extinct.

*British Cameroons:* Mt. Cameroon (13,533 ft.). Has several craters. Last erupted in 1922.

*Lesser Antilles (West Indian Islands):* Mt. Pelée, in northwestern Martinique (about 4,400 ft.). Eruption in 1902 destroyed town of St. Pierre and killed approximately 40,000.

#### Indian Ocean Region

*Comoro Islands* (east of northern Mozambique): One volcano, Kartala (over 500 ft.), is visible for over 100 miles. Last erupted in 1904.

*Réunion Island* (east of Madagascar): Mt. de la Fournaise (Le Volcan) (8,610 ft.). Large lava flows.

*Tanganyika Territory:* Kilimanjaro (19,341 ft.). Extinct. Highest mountain in Africa.

### THE PACIFIC AREA

#### Northwest Portion

*Kamchatka:* 14-18 active volcanoes.

*Shiveluch* (over 10,500 ft.). Most northern volcano of Kamchatka group.

*Klyuchevskaya (Kluchev)* (15,912 ft.). Erupted 1954.

*Koryatskaya* (over 11,500 ft.). Violent eruption in 1895.

*Kurile Islands:* At least 13 active volcanoes and several submarine outbreaks.

*Japan:* at least 33 active vents.

*Fujiyama (Fujisan)*, southwest of Tokyo (12,385 ft.). Symmetrical in outline, snow-covered. Regarded as a sacred mountain. Adzumayama (7,733 ft.).

*Asamayama* (8,182 ft.). Continuously active; violent eruption in 1783; latest in 1955.

*Asosan* (5,223 ft.). Crater 10 by 15 miles is the largest known in the world; erupted most recently in 1953, killing several students.

*Bandaian*, about 125 miles north of Tokyo (9,037 ft.). Violent eruption in 1888 devastated a 27-square-mile area.

*Ryukyu archipelago:* Nakano-shima (3,485 ft.); Suwanose-shima (2,697 ft.).

*Bonin (Ogasawara) Islands:* Mt. Suribachi, on Iwo Jima (546 ft.). A sulfurous steaming volcano. Raising of U. S. flag over Mt. Suribachi was one of the dramatic episodes of World War II.

*New Britain archipelago:* Numerous active vents, including Father, on New Britain (7,500 ft.).

*Santa Cruz Islands:* Tinakula (2,200 ft.).

*New Hebrides:* Lopevi (4,755 ft.).

*Samoa archipelago:* Savaii. An eruption in 1905 did considerable damage. Niuafoou (Tin Can) between Samoa and Fiji Islands has a crater 6,000 feet below and 600 feet above water.

*Philippine Islands:* about 100 eruptive centers; Hibok Hibok on Camiguin island erupted in Sept. 1950, and again in Dec. 1951, when about 750 were reported killed or missing; eruptions continued in 1952-53.

*Taal*, on Volcano Island in Lake Bombon (about 1,000 ft.). Crater over 7,500 ft. in diameter.

*Mayon*, in southeastern Luzon (7,946 ft.). An almost perfect cone. Continuous mild activity. Destructive eruption in 1897.

*Moluccas:* A volcanic chain of islands which contains several active volcanoes.

#### Hawaiian Group:

*Mauna Loa* (13,680 ft.). Also called "Long Mountain." Discharges more lava than any other volcano. Largest volcanic mountain in the world in cubic content, with crater of 3.7 sq. mi. Violent eruption in June, 1950, with lava pouring 25 mi. into the ocean.

*Mauna Kea* (13,784 ft.). Highest mountain in group.

Hualalal (8,269 ft.). Has many small pit craters. Only lava flow in historic times was in 1801.

Kilauea (4,090 ft.). A vent in side of Mauna Loa but apparently erupts independently of it. One of the most spectacular and active craters. Crater has an area of 4.14 sq. mi. Erupted 1952 and again in 1955, with considerable damage.

#### Southwest Portion

**Sumatra:** Ninety volcanoes have been discovered; 12 are now active. The most famous, Krakatoa, is a small volcanic island in the Sunda Strait. Numerous volcanic discharges occurred in 1883. One explosion caused the disappearance of the highest peak and the northern part of the island. Fine dust was carried around the world in the upper atmosphere. Over 36,000 persons lost their lives in resultant tidal waves, which were felt as far away as Cape Horn. Active in 1928, 1950 and 1953.

**Java:** Thirteen of 125 volcanic centers are active. Few serious eruptions. Galunggung is famous for two destructive eruptions in 1822. It is thought that over 100 villages and about 4,000 lives were lost. Eruption of Merapi in 1954 caused number of deaths.

**Lesser Sunda Islands:** Fifteen eruptive cones. Tamboro on Soembawa (Sumbawa) (about 9,000 ft.) was 13,000 ft. prior to a severe eruption in 1815, which ejected an estimated 36 cu. mi. of material.

**Melanesian area:** Volcanoes are located on New Guinea, New Hebrides, Santa Cruz, Solomons, and on numerous other small islands. Eruption of Mt. Lamington in Papua Territory, New Guinea, in Jan., 1951, killed more than 3,000.

**New Zealand:** Tarawera, on North Island. Severe eruption in 1886 destroyed the famous pink and white sinter terraces of Rotomahana, a hot lake.

Ngauruhoe (7,515 ft.). Emits steam and vapor incessantly. Major eruptions, 1952-54.

#### Northeast Portion

**Aleutian area:** There are 32 active vents known, and numerous inactive ones.

Shisaldin, on Unimak (8,683 ft.). Latest eruption Jan., 1947.

Bogosloff, on Bogosloff island (Castle) (about 1,000 ft.). Mountain first appeared after an eruption in 1796.

#### Alaska:

Wrangell (14,005 ft.) and Katmai (about 7,500 ft.).

On June 6, 1912, a violent eruption of the volcano Nova Rupta occurred, during which the "Valley of Ten Thousand Smokes" was formed.

**United States:** Lassen Peak, in California (10,453 ft.). Only observed active volcano in the United States. Last period of activity in 1914-17. Other mountains of volcanic origin include Mt. Shasta, Mt. Hood,

Mt. Rainier, and the mountain that contains Crater Lake.

#### Mexico:

Popocatepetl (17,883 ft.). Crater 673 deep and  $2\frac{1}{2}$  mi. in circumference. Not entirely extinct; steam still escapes.

Colima (14,239 ft.), in group that had frequent eruptions.

Orizaba (Citlaltepetl) (18,696 ft.).

Tuxtla (4,900 ft.). Had a violent eruption in 1793 but is now quiescent.

Parícutin. First appeared in Feb., 1943. In less than a week a cone over 140 miles high developed with a crater one quarter mile in circumference. Cone grew over 1,500 ft. in 1943. Erupted 1952.

Boquerón ("Big Mouth"). Newest volcano in Western Hemisphere, discovered Sept. 1952 on San Benedicto island, about 200 mi. south of Lower California.

#### Guatemala:

Santa María Quezaltenango (12,361 ft.). Frequent activity between 1902-08 and 1922-28 after centuries of quiescence. Most dangerously active vent of Central America. Other volcanoes include Tajumulco (13,814 ft.) and Atitlán (11,633 ft.).

**El Salvador:** Izalco, "beacon of Central America," which first appeared in 1770 and is still growing (erupted in July, 1950). San Salvador, which had a violent eruption in 1923 and Conchagua, which erupted with considerable damage early in 1947.

**Nicaragua:** Volcanoes include Telica, Coseguina and Momotombo. Between Momotombo on the west shore of Lake Managua and Coseguina overlooking the Gulf of Fonseca, there is a string of more than 20 cones, many still active. One of these, Cerro Negro, erupted in July, 1947, with considerable damage and loss of life, and again in 1948-50.

**Costa Rica:** Four volcanic cones whose bases merge are Poás (8,895 ft.), Barú (9,280 ft.), Irazú (10,525 ft.), and Turrialba (11,350 ft.).

#### Southeast Portion

**Colombia:** Huila (18,700 ft.), a vapor-emitting volcano, and Tolima (17,109 ft.).

Eruption of Puracé (15,420 ft.), 1947, killed 17.

**Ecuador:** Cotopaxi (19,344 ft.). Perhaps highest active volcano in the world. Possesses a beautifully formed cone.

Cayambe (19,170 ft.). Almost on equator. Other volcanoes include Tungurahua (16,689 ft.) and Sangay (17,470 ft.).

**Peru and Bolivia:** Many active volcanoes. Misti, near Arequipa, Peru (19,167 ft.). Sajama, in Bolivia (21,391 ft.).

Licancabur, in Bolivia (about 19,500 ft.).

**Chile and Argentina:** About 25 active volcanoes. Parícutin, Chile, 1948, and of Nilahue at Ríñihue, 1955.



## Interesting Caves and Caverns of the World

**Aggtelek.** In village of same name, northern Hungary. Large stalactitic cavern about 5 miles long.

**Altamira Cave.** Near Santander, Spain. Contains animal paintings (Old Stone Age art) on roof and walls.

**Antiparos.** On island of same name in the Grecian Archipelago. Some stalactites are 20 ft. long. Brilliant colors and fantastic shapes.

**Aue Grotto.** On island of Capri, Italy. Cavern hollowed out in limestone by constant wave action. Now half filled with water because of sinking coast. Name derived from unusual blue light permeating the cave. Source of light is a submerged opening, light passing through the water.

**Carlsbad Caverns.** Southeast New Mexico. Largest underground labyrinth yet discovered. Three levels: 754, 900, and 1,320 feet below the surface.

**Craigal's Cave.** On island of Staffa off coast of western Scotland. Penetrates about 200 ft. inland. Contains basaltic columns almost 40 ft. high.

**Červená Cave.** Near Dobsina, Czechoslovakia. Noted for its beautiful crystal effects.

**Enliven Caves.** In Blue Mountain plateau, New South Wales, Australia. Beautiful stalactitic formations.

**Enliven's Cavern.** Near Torquay, England. Source of much information on Paleolithic man.

**Luray Cavern.** Near Luray, Virginia. Has large stalactitic and stalagmitic columns of many colors.

**Mammoth Cave.** Limestone cavern in central Kentucky. Cave area is about 10 miles in diameter but has at least 150 miles of irregular subterranean passageways at various levels. Temperature remains fairly constant at 54°F.

**Peak Cavern or Devil's Hole.** Derbyshire, England. About 2,250 ft. into a mountain. Lowest part is about 600 ft. below the surface.

**Postumia (Adelsberg) Grotto.** Near Postumia in Julian Alps, about 25 miles N.E. of Trieste. Stalactitic cavern, largest in Europe. Piuca (Pivka) River flows through part of it. Caves have numerous beautiful stalactites.

**Singing Cave.** Iceland. A lava cave; name derived from echoes of people singing in it.

**Wind Cave.** In Black Hills of South Dakota. Limestone caverns with stalactites and stalagmites almost entirely missing. Variety of crystal formations called "boxwork."

**Wyandotte Cave.** In Crawford County, southern Indiana. A limestone cavern with five levels of passages; one of the largest in North America. "Monumental Mountain," approximately 135 ft. high, is believed to be one of the world's largest underground "mountains."

## Geysers

Geysers exist in many volcanic regions of the world such as Japan and South America, but their greatest development is in Iceland, New Zealand and Yellowstone National Park, Wyoming, U. S. A.

**Iceland.** The principal geyser area is about 10 miles northwest of Mt. Hekla, where there are more than 100 geysers and hot springs in about two square miles. The main ones are the following:

**Great Geyser (Geysir).** Sends up a column 160 to 180 ft. high intermittently from an opening more than 9 ft. across and about 70 ft. deep.

**Strokkur (Churn).** Constant bubbling and occasional eruptions.

**New Zealand.** There is a great profusion of boiling springs, steam jets and mud volcanoes northeast of Lake Taupo on North Island. Main geysers are *Waikite*, with a 30-35 ft. column, *Pohutu* and *Waimaiku*.

**United States**  
**Yellowstone National Park, Wyoming.** There are 120 named geysers in Yellowstone and perhaps half that number un-

named. Most of the geysers and the 4,000 or more hot springs are located in the western portion of the park. The most important are the following:

**Norris Geyser Basin** has 24 or more active geysers; the number varies. There are scores of steam vents and hot springs. *Valentine* is highest, erupting 50-75 ft. at intervals varying from 18 hr. to 3 days or more. *Minute*, 15-20 ft. high, several hours apart. Others include *Steamboat*, *Fearless*, *Veteran*, *Vixen*, *Corporal*, *Whirligig*, *Little Whirligig* and *Pinwheel*.

**Lower Geyser Basin** has at least 18 active geysers. *Fountain* throws water 50-75 ft. in all directions at unpredictable intervals. *Clepsydra* erupts violently from four vents up to 30 ft. *Great Fountain* plays every 8 to 15 hr. in spurts from 30 to 90 ft. high.

**Midway Geyser Basin** has vast steaming terraces of red, orange, pink and other colors; there are pools and springs, including the beautiful *Grand Prismatic Spring*. *Excelsior* crater discharges boiling water into Firehole River at the rate of 6 cu. ft. per second.

*Upper Geyser Basin* includes *Artemisia*, which sends up a column 15-35 ft. every 24 to 30 hr. *Riverside* has an unusual cone; it throws water 75 ft. obliquely over the river for half an hour. Interval ranges from 6 to 8½ hr.

*Rocket* is irregular and unpredictable, as is its neighbor *Grotto*.

*Giant* erupts up to 200 ft. at intervals of 2½ days to 3 mo.; eruptions last about 1½ hr. *Daisy* sends water up to 75 ft. but is irregular and frequently inactive.

*Old Faithful* sends up a column varying from 116 to 175 ft. at intervals of about 65 min., varying from 33 to 90 min. Eruptions last about 4 min., during which time about 12,000 gal. are discharged.

*Giantess* seldom erupts, but during its active periods sends up streams 150-200 ft.

*Lion Group*: *Lion* plays up to 60 ft. every 2-4 days when active; *Little Cub* up to 10 ft. every 1-2 hr. *Big Cub* and *Lioness* seldom erupt.

*Castle* usually erupts twice daily to a height of 75 ft.

*Mammoth Hot Springs*. There are many geysers in this area. The formation is travertine. Sides of a hill are steps and terraces over which flow the steaming waters of hot springs laden with minerals. Each step is tinted by algae to many shades of orange, pink, yellow, brown, green and blue. Terraces are white where no water flows.

Other groups of geysers, hot pools and mud pots are located on the west shore of Shoshone Lake, on West Thumb Bay at Mud Volcano, in the Grand Canyon of the Yellowstone, and on Mirror Plateau.

## Famous Ship Canals of the World

Name	Location	Year opened	Length (mi.)	Width (ft.)	Depth (ft.)	Locality
Albert	Belgium	1939	80.0	53.0	16.5	Europe
Amsterdam-Rhine	Netherlands	1952	45.0	164.0	41.0	Europe
Beaumont-Port Arthur	United States	1916	40.0	200.0	34.0	North America
Chesapeake and Delaware	United States	1927	19.0	250.0	27.0	North America
Houston	United States	1914	50.0	200.0	33.0	North America
Kiel	Germany	1895	53.3	144.0	37.0	Europe
Panama	Canal Zone	1914	50.0	110.0	41.0	Central America
Sault Ste. Marie	Canada	1895	1.2	60.0	16.8	North America
Sault Ste. Marie	United States	1915	1.6	80.0	25.0	North America
Suez	Egypt	1869	87.5	197.0	34.0	Asia
Welland	Canada	1931	27.6	80.0	25.0	North America

## World Extremes of Climate

Data from U. S. Weather Bureau

### Highest recorded shade temperature:

World: 136° F. at Azizlia, Libya, North Africa, September 13, 1922.

United States: 134° F. at Death Valley, California, July 10, 1913.

### Lowest recorded temperature:

World: -90° F. at Verkhoyansk, Siberia, U.S.S.R., February 5 and 7, 1892; a temperature of -94° F. was reported in Siberia during the winter of 1946-47 but was not verified by the Soviet government.

United States: -70° F. at Rogers Pass, Montana, January 20, 1954.

### Highest mean annual temperature:

World: 88° F. at Lugh, Somaliland, Africa.

United States: 77.6 at Key West, Fla.

### Lowest mean annual temperature:

World: -14° F. at Framheim, Antarctica.

United States: 27.0° F. at Mt. Washington, N. H. (23-year record).

### Maximum rainfall for 24-hour period:

World: 46 inches at Baguio, Luzon, Philippines, July 14-15, 1911.

United States: 26.12 inches at Hoegaes Camp (Camp Le Roy), California, January 22-23, 1943.

### Maximum recorded rainfall in one month:

366 inches at Cherrapunji, India, July, 1861 (over 150 inches fell in 5 consecutive days in August, 1841). Average annual rainfall at Cherrapunji is 450 inches. The 3-year average annual rainfall at Mt. Waialeale, Island of Kauai, Hawaiian Islands, however, is 472 inches.

### Minimum recorded rainfall:

World: .02 inch at Arica, Chile, average yearly fall during 43 years.

United States: 1.70 inches at Greenland Ranch, California, average yearly fall during 43 years. During one period of 413 consecutive days, this station recorded no rain.

Average annual precipitation for the United States is about 29 inches.

Louisiana is the wettest state, with an annual average (65 years) of 57.34 inches.

evada is the driest state, with an annual average (66 years) of 8.60 inches. Highest local average annual rainfall in the United States was 150.73 inches at Wynoochee Oxbow, Washington, based on a 13-year record. Greatest 6-hour fall was at Lake Charles, La., 15.38 inches, on June 19, 1947. Greatest 24-hour U. S. rain (unofficially observed) was 38.2 inches, Thrall, Tex., Sept. 9-10, 1921. Heavy snowfall records include 60 inches in one day at Giant Forest, California; 87 inches in 27½ hours and 95 inches in 32½ hours at Silver Lake, Colorado; and 42 inches in 2 days at Angola, New York. In the New York City blizzard of Dec. 26, 1947, 25.8 inches of snow fell in about 20 hours, almost 5 inches more than fell in the blizzard of March, 1888. Greatest seasonal snowfall was 884 inches, over 73 feet, at Tamarack, California, during 1906-07. Large hailstones include one 17 inches in circumference and weighing 1½ pounds which fell at Potter, Nebraska, July 6, 1928.

## Ancient Empires

The Egyptian and Babylonian empires, near Eastern civilizations whose cultures mark the beginning of written history, had their origins in the nebulous period of ancient history prior to the year 4000 B.C. They developed rapidly in the fertile river valleys of the Nile in Egypt and the Tigris-Euphrates in Mesopotamia after the discovery of metals and the invention of writing. Their governments were all-powerful, with the people subjugated and without political rights. The Egyptians regarded their king as a god. In Babylon, the ruler was a priest-king, earthly representative of the gods. Nevertheless, these Near East cultures made great contributions to the eternal march of man; they advanced the ways of making and doing things, produced the earliest literature, developed the principles of law (the code of Hammurabi, Babylonian king of the 18th [or possibly 17th] century B.C., the oldest code of law) and science, learned the basic principles of art, and evolved early religious worship.

The influence of Babylon and Egypt was felt in the rise of the Semitic tribes of Syria, the Hittites in Asia Minor, and the people of the Aegean region. Between the years 1200 and 800 B.C., the small Syrian states grew to great power and then were overwhelmed by the great empire of the Assyrians, the warlike peasants of the Tigris valley, who took the lessons learned from the Babylonians and spread that culture over their domains. The Assyrians, like the Egyptians and the Babylonians, in turn fell under the power of the Persians in the century between 600 and 500 B.C. By 525 B.C., the Persian Empire extended from India to Egypt, the greatest the world had ever seen.

The lessons learned by these early Near Eastern civilizations were transmitted to Greece, which developed its illustrious empire in the Aegean region, after the inhabitants of the island of Crete had absorbed the Egyptian culture. The mainland Greeks overthrew the Cretans and in turn were succeeded by the Doric Greeks, who spread their culture across the Aegean, the Asia Minor coast, and into the Mediterranean and Black Sea regions. The char-

acteristic Greek political institution was the city-state, first ruled by kings and often temporary monarchical tyrannies, and finally by the participation of free citizens. Literature and the arts flourished, and by the 5th century B.C., when Athens became the great city of the Greeks, drama had risen to full maturity with the great tragedies of Sophocles and Euripides and the comedies of Aristophanes. Architecture and art advanced apace. The Greeks, learning much from their Egyptian teachers, produced such superb buildings as the Parthenon and created amazingly beautiful statues through the use of living models. Religion, which was closely linked with art, also flourished, as did the development of philosophy, under the great Socrates (470?-399 B.C.), Plato (427?-347 B.C.), and Aristotle (384-322 B.C.). Wars weakened the city-states, and they fell to Alexander the Great in the 4th century B.C.

Last among the great ancient empires was the Roman, which developed in Italy and gained control over the Mediterranean region after absorbing the culture of Greece and combining with it new principles of law and art and teaching this new learning to the West. The development of the Roman civilization began in 510 or 509 B.C., when the peoples on the peninsula of Italy freed themselves from the rule of the Etruscans. The Romans, with a republican form of government, speedily conquered Italy and the Mediterranean region, and the Roman governors became men of great wealth, corrupting the city-state system and making it a graft-ridden machine of exploitation. The failure of the government to check this self-seeking influence brought on a revolt which resulted eventually in the rise of Julius Caesar to dictatorship in 46-44 B.C. Caesar's murder in the Senate at Rome was followed in 27 B.C. by the establishment of the one-man rule of Augustus over the Roman Empire. Legal practices were developed and became the foundations of modern law. Great roads, bridges and buildings were constructed. This great ancient civilization began to crumble in the 3d century A.D.



## Languages of the World

(spoken natively by 5,000,000 or more people)

Language	Number speaking	Language	Number speaking
American Indian: including Mayan, Quéchuá and 750-1,000 other languages and dialects	15,000,000	Bisayan, Ilocano, Javanese, Madurese, Malay, Malagasy, Sundanese, Tagalog	105,000,000
Amharic (Ethiopia)	5,600,000	Iranian: including Baluchi, Kurdish, Persian, Pushtu	26,500,000
Annamese (Indo-China)	20,000,000	Italian	50,000,000
Arabic	65,000,000	Japanese	90,000,000
Bantu: including Swahili, Zulu (S. Africa)	45,000,000	Javanese	41,000,000
Bengali (India; Pakistan)	70,000,000	Kanarese (India)	14,000,000
Berber dialects (N. Africa)	6,000,000	Korean	30,000,000
Bihari (India)	37,000,000	Lahnda (India; Pakistan)	13,000,000
Bisayan (Philippines)	9,000,000	Madurese (Indonesia)	6,500,000
Bulgarian	7,000,000	Malay (Indonesia)	14,000,000
Burmese	13,000,000	Malayalam (India)	14,000,000
Catalan (Spain)	6,000,000	Marathi (India)	27,000,000
Chinese: including Mandarin, Cantonese and others	475,000,000	Munda (India)	5,000,000
Cushitic: including Somali (Ethiopia)	7,000,000	Oriya (India)	13,000,000
Czech	8,500,000	Persian	12,000,000
Dravidian: including Kanarese, Malayalam, Tamil, Telugu (India)	95,000,000	Polish	30,000,000
Dutch	15,000,000	Portuguese	63,000,000
English	265,000,000	Punjabi (India; Pakistan)	22,000,000
Ethiopian: including Amharic	6,400,000	Pushtu (Afghanistan; Pakistan)	8,000,000
Finno-Ugric: including Estonian, Finnish, Hungarian, Karelian, Lappish	21,500,000	Rajasthan (India; Pakistan)	17,000,000
Flemish (Belgium)	5,000,000	Rumanian	16,000,000
French	65,000,000	Russian	200,000,000
German	90,000,000	Serbo-Croatian (Yugoslavia)	15,000,000
Greek	8,000,000	Siamese	16,000,000
Gujarati (India; Pakistan)	16,000,000	Sinhalese (Ceylon)	5,500,000
Hausa (Central Africa)	9,000,000	Spanish	150,000,000
Hindi (India; Pakistan)	150,000,000	Sudanic: including Hausa (Central Africa)	75,000,000
Hungarian	13,000,000	Sundanese (Indonesia)	13,000,000
Indic: including Assamese, Bengali, Bihari, Gujarati, Hindi, Lahnda, Marathi, Oriya, Punjabi, Rajasthani, Sindhi, Sinhalese	415,000,000	Swahili (E. Africa)	8,000,000
Indonesian: including Balinese,		Swedish	7,000,000
		Tagalog (Philippines)	5,000,000
		Tamil (India)	27,000,000
		Telugu (India)	33,000,000
		Tibeto-Burman: including Tibetan and Burmese	20,000,000
		Turkic: including Kazakh, Tatar, Turkish, Uzbek	45,000,000
		Turkish	20,000,000
		Uzbek (U.S.S.R.)	6,000,000
		Yiddish	5,000,000

## Universities—Medieval and Modern

Universities, in the modern sense of the term, sprang up in the 12th and 13th centuries in response to the resurgence of learning that preceded the Renaissance in Europe. Procedure at the early universities was informal, with students gathering at some place in a city to listen to a pre-eminent teacher. There were no campuses, buildings or endowments. Actually, the term "university" once meant a guild or corporation; there were, in the medieval period, "universities" of bootmakers, weavers, etc. Thus the university of learning was similar in organization to the guilds. The students filled the role of apprentices and the teachers were the masters.

The first European university was that of Salerno in the 9th century, when it was known as a school of medicine. By the 11th century, it had become one of the most famous medical schools of Europe.

*University of Bologna.* Originated about 1200 as student guilds for protection against the merchants and citizens of Bologna who had raised prices of food and lodging. It was famous for its legal scholars. The students were organized into two guilds and exercised a great deal of authority over the administration.

Other Italian universities famed in the Middle Ages included those at Arezzo, Fer-

ara, Florence, Modena, Naples, Padua, Parma, Perugia, Siena and Vicenza.

*University of Paris.* Originated between 150 and 1170 in a cathedral school on the Ile de la Cité, it was later moved to the left (south) bank of the Seine, although it remained under the authority of the chancellor of Notre Dame. It developed into the most famous continental center of learning of its day. Its four principal schools were theology, medicine, law and arts. By the 14th century, the university had some 40 colleges, of which the *Sorbonne* became the most celebrated.

The universities of Paris and Bologna had a marked influence in the subsequent creation of other university centers. About 167-68 there was a migration of students from Paris to *Oxford* (founded in the 12th century) and about 1210, from Oxford to *Cambridge* (also founded in the 12th century).

Other famous universities of the Middle Ages include the *University of Toulouse* (1233), *Salamanca* (1243), *Seville* (1254), *Orléans* (1305), *Valladolid* (1346), *Prague* (1347), *Kraków* (1364), *Vienna* (1364), *Erlangen* (1379), *Heidelberg* (1385), *Cologne* (1388), *Leipzig* (1409), *Rostock* (1419) and *Louvain* (1426).

### The Renaissance

The Renaissance gave fresh impetus to the universities of Europe. In France three of importance arose in the 15th century—the *University of Aix* (1409, Provence), the *University of Poitiers* (1431) and the *University of Caen* (1437).

Other French institutions of note that arose in this era were at *Bordeaux* (1441), *Valence* (1452), *Nantes* (1463) and *Bourges* (1465). New European universities were also founded at *Trier* (1450), *Freiburg* (1455), *Ingolstadt* (1459), *Basel* (1460), *Budapest* (1475), *Mainz* (1476), *Uppsala* (1477), *Tübingen* (1477), *Copenhagen* (1479), *Wittenberg* (1502), *Frankfurt on Oder* (1506) and *Coimbra* (1537).

*St. Andrews*, founded in 1411, was the first university in Scotland. Others were the *University of Glasgow* (1453) and the *University of Aberdeen* (1494). The *College of Edinburgh* was established in the Post-Reformation period (1582). In Ireland, *Trinity College* was founded in Dublin in 1591.

### Reformation and Post-Reformation

Until the Reformation, most of the institutions of higher learning in Europe were under the tutelage of the Catholic Church. After 1520, however, many established universities declared their independence of the Church. Cromwell's rule brought about new scholastic methods at both Oxford and Cambridge and the es-

tablishment of new colleges thoroughly imbued with Protestantism.

But the first Protestant university was that of *Marburg*, Germany, founded in 1527. Other Protestant universities were: *Königsberg* (1544); *Jena* (1558); *Helmstedt* (1575); *Aldorf* (1575); *Giessen* (1607); *Strasbourg* (1621); *Halle* (1693).

### 18th, 19th and 20th Centuries

Among the more famous institutions in this era was *Göttingen* (1736), whose school of history became celebrated throughout Europe. Others were: *Erlangen* (1743); *Berlin* (1809); *Lemberg* (Lwów) (1816); *Bonn* (1818); *Helsingfors* (1828); the *National University at Athens* (1837); *Bucharest* (1864); *Tokyo* (1877); *Sofia* (1888) and *Kyoto* (1897).

Among the more famous British universities established in the 19th and 20th centuries were the *University of London* (1828); *Manchester* (1851); the *Mason University College* in Birmingham, later *Birmingham University* (1900); *Liverpool* (1903); *Leeds* (1904); and the *University of Sheffield* (1905). The *University of Wales* (1893) is composed of the colleges of *Aberystwyth*, *Bangor* and *Cardiff*.

There are many large and important universities in the British Commonwealth. In Canada, the famous *McGill University* in Montreal was founded in 1821. Others are the *University of Toronto* (1827); *Queens University* at Kingston, Ont. (1841); *Laval University*, Quebec (1852); *Dalhousie*, Halifax (1818), and *Montreal University* (1878).

The early universities in India were patterned after London. University rather than on the Oxford-Cambridge style, and were purely examining institutions. *Calcutta*, *Bombay* and *Madras* universities were founded in 1857 as examining bodies.

In Australia, the state plays an important role in the development of universities. The *University of Melbourne* (1853) has the largest enrollment. Among the others are *Adelaide* (1874); *Tasmania* (1890); *Queensland* (1909); *Sydney* (1850), and *Western Australia* (1911).

There are also many well-endowed universities in New Zealand, South Africa, and other parts of the Commonwealth.

By 1800, Russia had only three universities—*Vilna* (1578), *Dorpat* (1632) and *Moscow* (1755). Other institutions developed later were the *University of Kharkov* (1804); *Kazan* (1804); *Warsaw*, now Polish (originally established 1816, but closed 1832-69); *St. Petersburg* (1819); *St. Vladimir* in Kiev (1835); *Odessa* (1865) and *Tomsk*, in Siberia (1888). The building of universities after the Revolution of 1917 was spurred by the Soviet government.

In China, the growth of universities was hampered by the chaotic state of the government in the 1900's, the recurring civil wars and the conflict with Japan.

## The United States

Universities in the United States marched in step with the progress of the nation. The early settlers brought a heritage of European culture which they planted in New England soil. The first university in the country was started as *Harvard College* in 1636, with an endowment totaling 800 pounds. Harvard was to become probably the most famous of the American universities.

The *College of William and Mary* (1693) was the second institution of higher learning established in the colonies. Others started during the colonial period (current names only) are: *Yale* (1701); *University of Pennsylvania* (1740); *Princeton* (1746); *Washington and Lee* (1749); *Columbia* (1754); *Brown* (1764); *Rutgers* (1766) and *Dartmouth* (1770).

After the Revolution of 1776, the state tax-supported university was established. The *University of Virginia* (1819) was a notable early example of this type.

Colleges for women grew up in the second quarter of the 19th century. Among these are: *Mt. Holyoke* (1837); *Elmira* (1855); *Vassar* (1861); *Wells* (1866); *Hunter* (1870); *Wellesley* (1870); *Smith* (1871) and *Bryn Mawr* (1880).

In the latter part of the 19th century universities established by private endowments arose. Typical of these are: *Cornell* (1865), which is also a land-grant institution; *Johns Hopkins* (1876); *Stanford* (1885) and the *University of Chicago* (1890).

## Libraries of the World

### Europe and Asia

Among the great libraries of the world, the *British Museum* remains in the first rank with more than 6,000,000 printed volumes and manuscripts. It contains such outstanding treasures as the *Codex Alexandrinus* and the *Codex Sinaiticus* of the Bible, the best collection of Greek papyri from Egypt, and vast collections of original historical manuscripts of incalculable value. Some 150,000 volumes were destroyed in air raids during World War II, but many were replaced later.

One of the finest libraries in the world is the *Bibliothèque Nationale* in Paris, which has approximately 6,000,000 volumes, 155,000 manuscripts, 450,000 medals and coins, and 5,000,000 prints and engravings.

The *State Library* in Berlin, founded in 1659-61, was combined in 1947 with the library of the University of Berlin to form a new institution known as the *Öffentliche Wissenschaftliche Bibliothek*. Prior to World War II, the *State Library* had 2,850,000 volumes; the new combined library had only 1,500,000. The *State Library* at Munich also suffered extensive war losses, with some 500,000 volumes destroyed; it now contains about 2,000,000. Estimates have placed the war losses of all German libraries at between 20 and 25 million volumes.

The *Nationalbibliothek* in Vienna has about 1,500,000 volumes and a large collection of papyri.

While not as large as some of the European state libraries, the *Biblioteca Apostolica Vaticana* in Rome has many priceless old manuscripts bequeathed to the Vatican over the centuries, including the *Codex Vaticanus* of the 4th century.

Three of the more important Italian libraries are the *Biblioteca Nazionale* in Naples, with about 1,400,000 volumes; the *Biblioteca Nazionale Centrale* in Florence, with 1,500,000 volumes; and the *Biblioteca Nazionale Centrale* in Rome, with approximately 1,940,000 volumes.

Other large European libraries are the *Bibliothèque Royale* in Brussels (1,600,000 volumes), the *Biblioteca Nacional* in Madrid (1,500,000), the *University Library* at Amsterdam (more than 1,500,000) and the *Royal Library* in Stockholm (850,000). The *Lenin State Library* in Moscow is said to contain 15,000,000 volumes (a figure that undoubtedly includes duplications) besides many collections of valuable historical documents. In Leningrad, the *Public Library* claims 10,000,000 volumes, and the *Libraries of the Academy of Sciences* some 8,000,000. There are said to be 300,000 libraries in all parts of the U.S.S.R.

In the Far East, the most extensive libraries are found in Japan, although war damage in 1944-45 was severe. In Tokyo, the *National Diet Library* (formerly the *Imperial Library*) was organized in 1947 as a deposit center. With its various branches, it contains an estimated 3,500,000 volumes. The *University Library* in Kyoto has about 1,700,000.

The oldest national libraries in South America are those of Argentina and Brazil, each founded in 1810 and each containing about 700,000 volumes.

### The United States and Canada

The earliest libraries in the colonial era were privately owned, although in 1732 Benjamin Franklin projected the first subscription library in Philadelphia. Endowments helped to set up many of the large



libraries, although many of these institutions are now receiving state or municipal support.

The largest library in the United States is the *Library of Congress*, established in 1800 by Congress. In 1956, it contained more than 10,860,000 books and pamphlets, and total collections of over 35,250,000. It extends services to members of Congress and other government departments, and also offers excellent facilities for persons engaged in scholarly research.

The *New York Public Library*, with some 5,250,000 volumes in 1955, is the largest public library in the U. S.

The *American Library Directory* for 1954 listed 12,478 libraries in the U. S., including 6,925 public (with 3,106 branches), 1,374 college and university, 1,923 special and 2,256 other types.

The growth of libraries attached to colleges and universities in the United States

has been phenomenal, and some of the university libraries are among the largest in the country. Those with more than 1,000,000 volumes each in 1955 were as follows: Harvard, 5,850,000; Yale, 4,246,000; California, including branches, 3,500,000; Columbia 2,893,000; Illinois, 2,650,000; Michigan, 2,304,000; Chicago, 1,884,000; Minnesota, 1,702,000; Cornell, 1,613,000 (1954); Pennsylvania, 1,375,000; Stanford, 1,258,000; Princeton, 1,250,000; Duke, 1,160,000; Northwestern, 1,146,000; Texas, 1,114,000; Ohio State, 1,066,000; Johns Hopkins, 1,048,000; New York University, 1,029,000.

In Canada, the most important public library is that of Toronto, which has more than 850,000 volumes. Large Canadian university libraries include those at Queens (267,000), Toronto (584,000), McGill (680,000), and Laval (380,000). The *American Library Directory* for 1954 listed a total of 719 libraries in Canada, including 683 public.

## Museums of the World

(For U. S. Museums, see pp. 330.)

The modern museum originated during the Renaissance, when the revival of interest in the arts and classical antiquity led princes, nobles and humanists to amass specimens of historical value and to house their collections in special buildings or galleries.

### Art Museums

The *British Museum*, London, contains some of the most famous historical objects of the world, including the Elgin Marbles and the Rosetta Stone.

*Victoria and Albert Museum*, London, whose primary object is to furnish examples to illustrate the history of art, emphasizes architecture and sculpture, ceramics, engraving, book production, paintings, textiles, etc. The library is devoted principally to fine and applied arts of all countries.

*National Gallery*, London, contains a great number of old Masters, including paintings by Da Vinci, Michelangelo, Titoretto, Mantegna, Titian, Bellini, Jan van Eyck, Rubens, Rembrandt, Holbein, Constable and Turner.

*Tate Gallery*, London, established as part of the National Gallery, was badly damaged during air raids of World War II, but was completely restored by 1949.

*Wallace Collection*, London, has many objects d'art and curios of French origin, and first-rank canvases and etchings of Italian, Spanish, Flemish, Dutch and English artists.

In France, the most famous gallery is the *Lowre* in Paris, noted for the magnificence of its architecture as well as for its art collection, which is the largest in

the world. Other Parisian museums of importance are *Cluny*, *Rodin*, *Guimet*, and *Carnavalet*.

Among the magnificent Italian museums, the *National Museum* at Naples contains one of the best arranged and classified collections. The *Uffizi Gallery* in Florence, founded by the Medici, has one of the world's largest and best collections of Italian art. Other galleries in Florence are the *Gallery of Modern Art* (*Pitti Palace*) and the *National Museum* (*Bargello*). Rome has numerous museums, including several in the Vatican.

In Berlin, the *National Gallery* was damaged during World War II.

The *Royal Museum of Fine Arts* in Brussels has a fine collection of French, Flemish and Dutch masters and houses many canvases by Rubens, Van Dyck, Jordaens, Rembrandt, Frans Hals and Jan Steen.

The *State Museum* in Amsterdam contains superb works by Rembrandt, Vermeer and others.

Among the notable art museums in other countries are the world-famous *Museo del Prado* in Madrid; the *Tretyakov Gallery* and the *Pushkin State Museum of Fine Arts* in Moscow; the *Hermitage State Museum* in Leningrad; and the *National Museum* in Tokyo, famed for its many Oriental paintings and examples of Oriental workmanship in lacquer, jade, ivory and metal.

### Science Museums

The *Ashmolean Museum*, oldest in Great Britain, was founded in 1683 by Oxford

University and houses a collection of archeological and classical rarities.

*Science Museum* of London has exhibits of scientific instruments and appliances which review the progress of science and the history of invention. Other London museums of science are the *Natural History (British Museum)*, the *Imperial War Museum* (exhibits of both World Wars) and the *Geological Museum*.

The *Liverpool Museums* contain valuable collections of natural history and antiquities and are divided into departments of zoology, botany, geology, archeology and ethnology. The buildings were almost completely destroyed during World War II, although most of the exhibits were saved.

The *Manchester Museum* serves as both a municipal and a university museum. The *Bristol Museum* contains departments of geology, zoology, botany, archeology and Bristol antiquities. The *National Museum of Wales* at Cardiff has departments of art, archeology, botany, geology and zoology.

In Edinburgh, Scotland, are the famed *Royal Scottish Museum*, which has collections in art, ethnography, natural history, technology and archeology; and the *National Museum of Antiquities of Scotland*, noted for its coin and manuscript collections.

The *National Museum* in Dublin and the *Municipal Museum* in Belfast have important science collections.

Notable institutions of continental Europe include the *Natural History Museum* in Paris, the *Museum of Oceanography* in Monaco, the *Natural History Museum* in Lisbon, the *State Museum of Geology and Mineralogy* in Leyden (Netherlands), the *Museum of Natural History* in Stock-

holm, the *Natural History Museum* in Vienna, the *Hungarian National Museum* in Budapest, the *National Museum* in Prague and the various science museums in Bern, Geneva, Zurich and Neuchâtel, Switzerland. Most larger cities of the U.S.S.R. have science museums of varying sizes, some specializing in local exhibits of natural history.

Famous science museums in Germany prior to World War II included the various sections of the *Staatliche Museen* in Berlin (re-established after the war) and the museum of ethnography in Hamburg.

In Calcutta is the *Indian Museum*, outstanding for its marine fauna and vertebrate fossils, and in Bombay the *Victoria and Albert Museum*.

In Australia are the *Queensland Museum* and the *Botanic Museum* in Brisbane, the *South Australian Museum* in Adelaide, and the *Australian Museum* in Sydney.

New Zealand contains the *Canterbury Museum*, Christchurch, rich in local fauna, flora and geological items, and a Maori and Polynesian ethnological collection.

In Africa, the *South African Museum* in Capetown, holds general and local history collections and others illustrating anthropology, ethnology and archeology. The *Durban Museum* contains much anthropological material. In Cairo are the notable collections of the *Egyptian Museum*.

Other museums of note include the *Archeological Museums* at Istanbul, the *Tokyo Science Museum*, the *National Museum of Natural History* in Santiago (Chile), the *National Museum* at Rio de Janeiro, and the *Argentine National Museum of Natural Sciences* at Buenos Aires.

## Zoological Gardens

North America has more than 30 major zoos, in the United States, Canada and Mexico. The *Quebec Zoological Society's* collection is made up of Canadian species; Toronto has many exotic species.

The first zoological garden in the United States was established in Philadelphia in 1874. Since that time nearly every large city in the country has acquired a zoo. Among the largest are the celebrated *Bronx Zoo* and the *Central Park Zoo* in New York, the *Lincoln Park Zoo* and the *Brookfield Zoo* in Chicago, and those in St. Louis, Cincinnati, Detroit, Kansas City and San Diego. The *National Zoological Park* in Washington, D. C., in a beautiful setting of hills, woods and streams, was established in 1890 by an act of Congress. Some of the U. S. zoos exhibit their collections in open-air, barless pits; the *Brookfield Zoo* is an example.

In Europe, zoological gardens have long been popular public institutions. The *Jardin d'Acclimatation*, in the Bois de Boulogne, Paris, was established in 1858, and a model zoo at Vincennes was added in 1897 for the Paris Exposition.

Germany had about 20 zoological gardens, many of which were developed in the peacetime years between World Wars I and II. Large zoos were located in Berlin and Frankfurt am Main. In Munich, the animals were grouped according to the continent of their origin. Others were established at Dresden, Leipzig and Cologne. At Stellingen, the *Hagenbeck Garden* became an outstanding show place and distributing center for animals. Smaller collections were established at Düsseldorf, Elberfeld and Hanover. Several German zoos, notably that at Berlin, were destroyed during World War II.

The *Schönbrunn* at Vienna is one of the best zoos in Europe. The Budapest zoological gardens house a fine collection of European birds. At Antwerp, the *Royal Zoological Society* founded a large menagerie in 1843. It was seriously damaged by German bombs during World War II.

In the British Isles, the outstanding collection is in the garden of the *London Zoological Society* in Regent's Park. Although this zoo received a number of direct bomb hits in 1940-41 and again in 1944, it remained open throughout World War II; visitors during this period numbered 6,500,000. Manchester and Clifton have smaller gardens, and the one at Edinburgh is famous for its collection of pen-

guins. The *Dublin Zoo* is noted for its lions, many of which were born there.

The Amsterdam zoo, with its East Indian collection and its aquarium, and the Rotterdam gardens are the two best known in the Netherlands. Built on a high elevation, the *Skansen Zoo* in Stockholm exhibits north European specimens. The most important gardens in the U.S.S.R. are found in Moscow, where northern as well as exotic species are collected. The zoo at Rome has part of its collection confined in barless pits. At Lisbon there is a small zoological garden, and in Madrid a part of the original royal menagerie. A new zoo notable for its landscaping was opened at Naples, Italy, in 1952.

## Famous Structures

(See also Seven Wonders of the World elsewhere in this section.)

### Ancient

The *Great Sphinx of Egypt*, one of the wonders of ancient Egyptian architecture, joins the pyramids of Giza and has a length of 189 ft. It was built in the 4th dynasty and was used as a temple.

Other Egyptian buildings of note include the *Temples of Karnak and Edfu* and the *Tombs at Beni Hassan*.

The *Parthenon of Greece*, built on the acropolis in Athens, was the chief temple to the goddess Athena. It was believed to have been completed by 438 B.C. The present temple remained intact until the 5th century A.D. Today, though the Parthenon is in ruins, its majestic proportions are still discernible.

Other great structures of ancient Greece were the *Temples at Paestum* (about 540 and 420 B.C.); the *Temple of Poseidon* (about 460 B.C.); the *Temple of Apollo at Corinth* (about 540 B.C.); the *Temple of Apollo at Bassae* (about 450-420 B.C.); the famous *Erechtheum* atop the Acropolis (about 421-405 B.C.); the *Temple of Athena Nike* at Athens (about 426 B.C.); the *Gymnasium at Athens* (174 B.C.-A.D. 131); the *Athenian Treasury at Delphi* (about 15 B.C.); the *Propylaea of the Acropolis at Athens* (437-432 B.C.); the *Theater of Dionysus at Athens* (about 350-325 B.C.); the "*House of Cleopatra*" at Delos (138 B.C.) and the *Theater at Epidaurus* (about 25 B.C.).

The *Colosseum (Flavian Amphitheater)* of Rome, the largest and most famous of the Roman amphitheaters, was opened for use A.D. 80. Elliptical in shape, it consisted of three stories and an upper gallery, rebuilt in stone in its present form in the third century A.D. Its seats rise in tiers, which in turn are buttressed by concrete vaults and stone piers. It could seat between 40,000 and 50,000 spectators. The

Colosseum was principally used for gladiatorial combat.

The *Pantheon* at Rome, begun by Agrippa in 27 B.C. as a temple, was rebuilt in its present circular form by Hadrian (A.D. 110-25). Literally the Pantheon was intended as a temple of "all the gods." It is remarkable for its perfect preservation today, and it has served continuously for 20 centuries as a place of worship.

Famous Roman arches include the *Arch of Constantine* (about A.D. 315) and the *Arch of Titus* (about A.D. 80).

### Later European

*St. Mark's Cathedral* in Venice (1063-67), one of the great examples of Byzantine architecture, was begun in the 9th century. Partly destroyed by fire in 976, it was later rebuilt as a Byzantine edifice.

Other famous Byzantine examples of architecture are *St. Sophia* in Constantinople (A.D. 532-37); *San Vitale* in Ravenna (542); *St. Paul's Outside the Walls*, Rome (5th century); the *Kremlin* baptism and marriage church, Moscow (begun in 1397); and *St. Lorenzo Outside the Walls*, Rome, begun in 588.

The *Cathedral Group* at Pisa (1067-1173), one of the most celebrated groups of structures built in Romanesque style, consists of the cathedral, the cathedral's baptistery, and the *Leaning Tower*. This trio forms a group by itself in the northwest corner of the city. The cathedral and baptistery are built in black and white marble. The campanile (*Leaning Tower*) is 179 ft. high and leans more than 16 feet out of the perpendicular. There is little reason to believe that the architects intended to have the tower lean.

Other examples of Romanesque architecture include the *Vézelay Abbey* in France (1130); the *Church of Notre-Dame-*



*du-Port* at Clermont-Ferrand in France (1100); the *Church of San Zeno* (begun in 1138) at Verona, and *Durham Cathedral* in England.

The *Alhambra* (1248-1354), located in Granada, Spain, is universally esteemed as one of the great masterpieces of Mohammedan architecture. Designed as a palace and fortress for the Moorish monarchs of Granada, it is surrounded by a heavily fortified wall more than a mile in perimeter. The location of the Alhambra in the Sierra Nevada provides a magnificent setting for this jewel of Moorish Spain.

The *Tower of London* is a group of buildings and towers covering 13 acres along the north bank of the Thames. The central *White Tower*, begun in 1078 during the reign of William the Conqueror, was originally a fortress and royal residence, but was later used as a prison. The *Bloody Tower* is associated with Anne Boleyn and other notables.

*Westminster Abbey*, in London, was begun in 1045 and completed in 1065. It was rebuilt and enlarged in 1245-50.

*Notre-Dame de Paris* (begun in 1163), one of the great examples of Gothic architecture, is a twin-towered church with a steeple over the crossing and immense flying buttresses supporting the masonry at the rear of the church.

Other famous Gothic structures are *Chartres Cathedral* (12th century); *Sainte Chapelle*, Paris (1246-48); *Laon Cathedral*, France (1160-1205); *Rheims Cathedral* (about 1210-50; rebuilt after its almost complete destruction in World War I); *Rouen Cathedral* (13th-16th centuries); *Amiens Cathedral* (1218-69); *Beauvais Cathedral* (begun 1247); *Salisbury Cathedral* (1220-60); *York Minster* or the *Cathedral of St. Peter* (begun in the 7th century); *Milan Cathedral* (begun 1386); and *Cologne Cathedral* (13th-19th centuries; badly damaged in World War II).

The *Duomo* (cathedral) in Florence was founded in 1298, completed by Brunelleschi and consecrated in 1436. The oval-shaped dome dominates the entire structure.

The *Vatican* is a group of buildings in Rome comprising the official residence of the Pope. The *Basilica of St. Peter*, the largest church in the Christian world, was begun in 1450. The *Sistine Chapel*, begun in 1473, is noted for the art masterpieces of Michelangelo, Botticelli and others. The *Basilica of the Savior* (known as *St. John Lateran*) is the first-ranking Catholic Church in the world, for it is the cathedral of the Pope.

Other examples of Renaissance architecture are the *Palazzo Riccardi*, the *Palazzo Pitti* and the *Palazzo Strozzi* in Florence; the *Farnese Palace* in Rome; *Palazzo Grimani* (completed about 1550) in Venice;

the *Escorial* (1563-93) near Madrid; the *Town Hall* of Seville (1527-32); the *Louvre* in Paris; the *Château* at Blois, France; *St. Paul's Cathedral*, London (1675-1710; badly damaged in World War II); the *Ecole Militaire*, Paris (1752); the *Pazzi Chapel* in Florence, designed by Brunelleschi (1429); the *Palace of Fontainebleau* and the *Château de Chambord* in France.

The *Palace of Versailles*, containing the famous Hall of Mirrors, was built during the reign of Louis XIV and served as the royal palace until 1793.

Outstanding European buildings of the 18th and 19th centuries are the *Superga* at Turin, the *Hôtel-Dieu* in Lyon, the *Belvedere Palace* at Vienna, the *Royal Palace* of Stockholm, the *Opera House* of Paris (1863-75); the *Bank of England*, the *British Museum*, the *University of London* and the *Houses of Parliament*, all in London; the *Panthéon*, the *Church of the Madeleine*, the *Bourse* and the *Palais de Justice* in Paris.

The *Eiffel Tower*, in Paris, was built for the Exposition of 1889 by Alexandre Eiffel. It is 984 ft. high.

#### Asiatic and African

The *Taj Mahal* (1632-50), at Agra, India, built by Shah Jahan as a tomb for his wife, is considered by some as the most perfect example of the Mogul style and by others as the most beautiful building in the world. Four slim white minarets flank the building, which is topped by a white dome; the entire structure is of marble.

Other examples of Indian architecture are the temples at Benares and Tanjore.

Famed Mohammedan edifices are the *Dome of the Rock* or *Mosque of Omar* in Jerusalem (A.D. 691); the *Citadel* (1166) and the *Tombs of the Mamelukes* (15th century), in Cairo; the *Tomb of Humayun* in Delhi; the *Blue Mosque* (1468) at Tabriz; and the *Tamerlane Mausoleum* at Samarkand.

*Angkor Vat*, outside the city of Angkor Thom, Cambodia, is one of the most beautiful examples of Cambodian or Khmer architecture. The sanctuary was built during the 12th century.

*Great Wall of China* (28 B.C.?), designed specifically as a defense against nomadic tribes, has numerous large watch towers which could be called buildings. It was erected by Emperor Ch'in Shih Huang Ti and is 1,400 miles long. Built mainly of earth and stone, it varies in height between 18 and 30 feet.

Typical of Chinese architecture are the pagodas or temple towers. Among some of the better known pagodas are the *Great Pagoda of the Wild Geese* at Sian (founded in 652); *Nan t'a* (11th century) at Fang Shan; the *Pagoda of Sung Yueh Ssu* (A.D. 523) at Sung Shan, Honan.

Other well-known Chinese buildings are the *Drum Tower* (1273), the *Three Great Gables* in the Purple Forbidden City (1627), the *Jade Buddha's Perfume Tower* (19th century), the *Porcelain Pagoda* and the *Summer Palace*, all at Peiping.

#### United States

*Rockefeller Center*, from 5th to 6th Aves. and from 48th to 51st Sts. in New York City, occupies 12½ acres and contains 15 buildings, the highest being the 70-story *CA Building*.

*Grant's Tomb*, at Riverside Dr. near 22nd St. in New York City, contains the bodies of Ulysses S. Grant and his wife. It was completed in 1897.

*The Cathedral of St. John the Divine*, at Cathedral Pkwy. and Amsterdam Ave. in New York City, was begun in 1892 but

is not yet completed. When completed, it will be the largest Gothic cathedral in the world: 601 ft. long, 146 ft. wide at the nave, 320 ft. wide at the transept.

*St. Patrick's Cathedral*, at 5th Ave. and 50th St. in New York City, has a seating capacity of 4,500. The nave was opened in 1877; the cathedral was dedicated in 1879.

*Lincoln Memorial*, in Washington, D. C., was dedicated in 1922. It has 36 columns (the number of states in 1865), each 44 ft. high. The main chamber contains a statue of Lincoln.

*Independence Hall*, in Philadelphia, was the scene of the signing of the Declaration of Independence and the drawing up of the U. S. Constitution. It was built between 1732-41 as the State House. The Liberty Bell is on the first floor.

## Great Dams of the World

Reservoir capacity, thousands of acre feet	Name	Location	Maximum height, feet	Date completed
31,142	Hoover	Colorado River, Ariz.-Nev.	726	1936
24,500	Garrison	Missouri River, N. Dak.	210	1954
19,600	Oahe	Missouri River, S. Dak.	230	*
19,412	Fort Peck	Missouri River, Mont.	250	1940
9,517	Grand Coulee	Columbia River, Wash.	550	1942
6,200	Fort Randall	Missouri River, S. Dak.	150	1954
6,100	Kentucky	Tennessee River, Ky.	160	1944
6,089	Wolf Creek	Cumberland River, Ky.	242	1951
6,000	Hirakud	Mahandi River, India	180	*
5,825	Denison	Red River, Okla.-Tex.	165	1944
5,407	Bull Shoals	White River, Ark.	278	1953
4,500	Shasta	Sacramento River, Calif.	602	1945
4,407	Gatun	Chagres River, Panama Canal Zone	115	1912
4,060	Aswan	Nile River, Egypt	174	1934
3,500	Hungry Horse	Flathead, S. Fk., Mont.	520	1953
3,263	Lázaro Cárdenas (El Palmito)	Nazas River, Mex.	295	1948
3,000	Salt Springs	North Fork, Mokelumne River, Calif.	345	1931
2,567	Norris	Clinch River, Tenn.	265	1936
2,432	Alvaro Obregón (Oviachic)	Yaqui River, Sonora, Mex.	187	1953
2,300	Saluda	Saluda River, S. C.	208	1930
2,219	Elephant Butte	Rio Grande, N. Mex.	301	1916
2,150	Mettur	Cauvery River, India	214	1934
2,092	Center Hill	Caney Fork River, Tenn.	240	1950
2,000	Hume	Murray River, Australia	180	1936
2,000	Kingsley	North Platte River, Nebr.	162	1941
1,997	Osage (Bagnell)	Osage River, Mo.	148	1931
1,983	Norfolk	North Fork River, Ark.	230	1944
1,980	Chelsea	Gatineau River, Canada	100	1927
1,975	Pensacola	Grand River, Okla.	152	1940
1,934	Marshall Ford (Mansfield)	Colorado River, Tex.	270	1942
1,820	Davis	Colorado River, Ariz.-Nev.	200	1949
1,706	Dale Hollow	Obe River, Tenn.-Ky.	183	1943
1,704	American Falls	Snake River, Idaho-Wyo.	92	1927
1,702	El Azucar	San Juan River, Mexico	142	1943
1,565	Cherokee	Holston River, Tenn.	212	1942
1,560	Sardis	Little Tallahatchie River, Miss.	117	1940
1,540	Douglas	French Broad River, Tenn.	280	1911
1,450	Fontana	Little Tennessee River, N. C.	470	1944
1,400	Roosevelt	Salt River, Ariz.	202	1943

\* Under construction in 1956.

## Notable Modern Bridges

Length of channel span, feet	Name	Location	Type*	Year completed
4,200	GOLDEN GATE	San Francisco	S	1937
3,800	MACKINAC STRAITS	Michigan	S	1957
3,500	GEORGE WASHINGTON	New York City	S	1931
2,800	TACOMA NARROWS	Tacoma, Wash.	S	1950
2,310	TRANSBAY	San Francisco	S	1938
2,300	BRONX-WHITESTONE	New York City	S	1939
2,150	DELAWARE MEMORIAL	Near Wilmington, De	S	1951
1,850	AMBASSADOR	Detroit, Mich.	S	1929
1,800	QUEBEC	Near Quebec, Canada	C	1917
1,750	DELAWARE RIVER	Philadelphia, Pa.	S	1926
1,700	FORTH	Firth of Forth, Scotland	C	1889
1,652	KILL VAN KULL	Bayonne, N. J.	SA	1931
1,650	SYDNEY HARBOR	Sydney, Australia	SA	1932
1,632	BEAR MOUNTAIN	Peekskill, N. Y.	S	1924
1,600	CHESAPEAKE BAY	Near Annapolis, Md.	S	1952
1,600	WILLIAMSBURG	New York City	S	1903
1,595.5	BROOKLYN	New York City	S	1883
1,550	LIONS GATE	Vancouver, Canada	S	1939
1,500	MID-HUDSON	Poughkeepsie, N. Y.	S	1930
1,500	HOWRAH	Calcutta, India	C	1943
1,470	MANHATTAN	New York City	S	1909
1,447	ANGUS L. MACDONALD	Halifax, N. S., Canada	S	1954
1,400	TRANSBAY	Oakland, Calif.	C	1936
1,380	TRIBOROUGH	New York City	S	1936
1,240	COLOGNE-RODENKIRCHEN	Germany	S	1954
1,212	TAPPAN ZEE	Nyack, N. Y.	C	1956
1,207	ST. JOHNS	Portland, Oreg.	S	1931
1,200	LONGVIEW	Longview, Wash.	C	1930
1,200	MT. HOPE	Near Bristol, R. I.	S	1929
1,182	QUEENSBORO	New York City	C	1909
1,114	FLORIANÓPOLIS	Florianópolis, Brazil	S	1926
1,100	CARQUINEZ STRAIT	Near San Francisco	C	1927
1,097	MONTREAL HARBOR	Montreal, Canada	C	1930
1,080	DEER ISLE	Deer Isle, Me.	S	1939
1,057	CINCINNATI	Cincinnati, Ohio	S	1867
1,050	COOPER RIVER	Charleston, S. C.	C	1929
1,042	NAGASAKI	Japan	SA	1955
1,034	COLOGNE-MÜLHEIM	Germany	S	1951
1,010	WHEELING	Wheeling, W. Va.	S	1849
977.5	HELL GATE	New York City	SA	1917
963	EAST ST. LOUIS	East St. Louis, Ill.	C	1950
950	RAINBOW	Niagara Falls, N. Y.	SA	1941
949	GRAND MERE	Quebec, Canada	S	1928
936	DUISBERG-RUHRORT- HAMBURG	Germany	S	1955
930	PEACE RIVER	Alaska Highway	S	1943
924	STORY	Queensland, Australia	C	1940
875	NATCHEZ	Natchez, Miss.	C	1940
871	BLUE WATER	Port Huron, Mich.	C	1938
866	SANDO	Sando, Sweden	CA	1943
864	SUNSHINE SKYWAY	St. Petersburg, Fla.	C	1954
845	DUBUQUE	Dubuque, Iowa	CT	1943
800	THOUSAND ISLANDS	Alexandria Bay, N. Y.	S	1938
800	RIP VAN WINKLE	Catskill, N. Y.	C	1935
800	HENRY HUDSON	New York City	SA	1936

\* C—Cantilever. S—Suspension. SA—Steel Arch. CA—Concrete Arch. CT—Continuous Truss. † Scheduled



## Area and Population by Country

Country	Area, sq. mi.	Population	Year <sup>1</sup>	Country	Area, sq. mi.	Population	Year <sup>1</sup>
Afghanistan.....	250,966	13,000,000	1953E	Lebanon.....	4,015	1,450,000	1954E
Albania.....	11,160	1,394,310	1955C	Liberia.....	43,000	1,250,000	1954E
Argentina.....	1,084,359	18,919,000	1955E	Libya.....	679,358	1,091,830	1954C <sup>11</sup>
Australia.....	2,974,581	9,201,691	1955E	Liechtenstein.....	61	14,000	1954E
Austria.....	32,374	6,974,000	1955E	Lithuania <sup>3</sup> .....	31,200	3,000,000	1954E
Belgium.....	11,779	8,896,246	1955E	Luxemburg.....	999	310,000	1955E
Bhutan.....	19,305	300,000	1954E	Maldives Islands.....	115	87,000	1953E
Bolivia.....	424,162	3,198,139	1955E	Mexico.....	760,373	29,679,415	1955E
Brazil.....	3,287,195	58,633,264	1955E	Monaco.....	0.59	20,202	1951C
Bulgaria.....	42,796	7,350,000	1954E	Mongolian People's Rep..	614,350	920,000	1954E
Burma.....	261,757	19,434,000	1955E	Morocco.....	174,553	9,700,000	....E
Cambodia.....	65,958	4,100,000	1954E	Nepal.....	54,510	8,431,537	1954C
Canada.....	3,619,616	15,818,000	1956E	Netherlands.....	12,482	10,821,661	1956E
Ceylon.....	25,332	8,589,000	1955E	New Zealand.....	103,740	2,172,350	1956C <sup>11</sup>
Chile.....	286,396	6,560,000	1955E	Nicaragua.....	57,143	1,245,000	1955E
China <sup>2</sup> .....	3,911,209	590,194,715	1953C	Norway.....	125,064	3,441,000	1955E
Colombia.....	439,519	12,657,000	1955E	Pakistan.....	364,737	75,842,165	1951C
Costa Rica.....	19,695	969,640	1955E	Panama.....	28,753	911,400	1955E
Cuba.....	44,217	5,829,029	1953C	Paraguay.....	157,047	1,565,000	1955E
Czechoslovakia.....	49,354	13,089,000	1955E	Peru.....	482,258	9,396,000	1955E
Denmark.....	16,577	4,452,000	1956E	Philippines.....	114,830	21,848,800	1955E
Dominican Republic.....	18,703	2,347,000	1954E	Poland.....	120,442	27,278,000	1955E
Ecuador.....	105,743	3,567,000	1954E	Portugal.....	35,358	8,765,000	1955E
Egypt.....	386,100	23,240,000	1955E	Rumania.....	91,654	17,489,794	1956C <sup>11</sup>
Estonia <sup>3</sup> .....	18,357	1,126,415	1940E	Saar.....	991	980,858	1954E
Ethiopia <sup>4</sup> .....	405,266	15,000,000	1951E	Salvador, El.....	8,260	2,193,000	1955E
Finland.....	130,119	4,248,773	1955E	San Marino <sup>5</sup> .....	38	13,500	1953E
France.....	212,736	42,774,445	1954C	Saudi Arabia.....	617,760	7,000,000	1952E
Germany (east) <sup>6</sup> .....	41,380	16,500,000	1955E	Spain.....	194,945	29,089,142	1955E
Germany (west) <sup>6</sup> .....	94,719	50,366,000	1956E	Sudan.....	967,500	8,764,000	1955E
Greece <sup>7</sup> .....	51,182	7,900,000	1954E	Sweden.....	173,564	7,290,112	1955E
Guatemala.....	42,042	3,263,000	1959E	Switzerland.....	15,941	5,004,000	1955E
Haiti.....	10,748	3,400,000	1954E	Syria.....	70,014	3,905,898	1955E
Honduras.....	43,277	1,660,000	1955E	Thailand.....	198,270	20,300,000	1955E
Hungary.....	35,905	9,808,000	1955E	Tibet.....	469,143	1,273,969	1953C
Ireland.....	39,768	159,302	1955E	Tunisia.....	48,332	3,800,000	1956C <sup>11</sup>
India <sup>8</sup> .....	1,269,640	356,829,485	1951C	Turkey.....	296,185	24,111,778	1955C <sup>11</sup>
Indonesia <sup>9</sup> .....	575,893	77,654,492	1955C	Union of So. Africa <sup>10</sup> .....	472,733	13,915,000	1956E
Iran.....	636,293	21,146,000	1955E	U.S.S.R.....	8,602,700	200,200,000	1956E
Iraq.....	171,599 <sup>10</sup>	4,948,000	1954E	United Kingdom.....	93,599	50,968,000	1955E
Ireland.....	26,601	2,894,822	1956C <sup>11</sup>	United States.....	2,974,726	147,440,000	1956E
Israel.....	7,984	1,789,075	1955E	Uruguay.....	68,369	2,800,924	1954E
Italy.....	116,316	48,107,000	1956E	Vatican City State.....	( <sup>14</sup> )	947	1952E
Japan.....	142,801	89,269,278	1955C <sup>11</sup>	Venezuela.....	352,143	6,000,000 <sup>15</sup>	1955E
Jordan <sup>12</sup> .....	37,264	1,403,000	1954E	Vietnam (north).....	62,808	13,000,000	1955E
Korea.....	85,266	28,600,000	1955E	Vietnam (south).....	64,451	12,000,000	1955E
Kosovo.....	91,500	1,260,000	1953E	Yemen.....	75,290	4,500,000	1953E
Latvia <sup>3</sup> .....	24,600	2,100,000	1954E	Yugoslavia.....	98,700	17,557,000	1955E

<sup>1</sup> E—Estimated; C—Census. <sup>2</sup> Including Formosa (Taiwan), Manchuria and Tibet. <sup>3</sup> Actually Russian S.S.R. but still recognized by U.S. as independent country. <sup>4</sup> Excluding Eritrea. <sup>5</sup> Excluding east Berlin. <sup>6</sup> Excluding east Berlin. <sup>7</sup> Including Dodecanese. <sup>8</sup> Excluding Kashmir. <sup>9</sup> Excluding Netherlands New Guinea. <sup>10</sup> Including desert area of 80,583 sq. mi. <sup>11</sup> Preliminary figure. <sup>12</sup> Including Arab Palestine. <sup>13</sup> Excluding South-West Africa. <sup>14</sup> 108.7 acres. <sup>15</sup> Excluding tribal Indians.

## National Holidays of American Countries

Argentina: Independence Day, July 9.  
 Bolivia: Independence Day, Aug. 6.  
 Brazil: Independence Day, Sept. 7.  
 Canada: Dominion Day, July 1.  
 Chile: Independence Day, Sept. 18.  
 Colombia: Independence Day, July 20.  
 Costa Rica: Independence Day, Sept. 15.  
 Cuba: Independence Day, May 20.  
 Dominican Republic: Independence Day, Feb. 27.  
 Ecuador: Independence Day, Aug. 10.  
 El Salvador: Independence Day, Sept. 15.  
 Guatemala: Independence Day, Sept. 15.  
 Haiti: Independence Day, Jan. 1.  
 Honduras: Independence Day, Sept. 15.  
 Mexico: Independence Day, Sept. 16.  
 Nicaragua: Independence Day, Sept. 15.  
 Panama: Independence Day, Nov. 3.  
 Paraguay: Independence Day, May 14.  
 Peru: Independence Day, July 28.  
 Uruguay: Independence Day, Aug. 25.  
 Venezuela: Independence Day, July 5.

## Largest Cities of the World

(Exact rating of the cities of the world according to size is impossible because of the diversity of the years in which census or estimated population figures have been issued. Therefore, the rating shown in this table must be considered only approximate.)

City and country	Population	Year*	City and country	Population	Year
1. London (Greater), England.....	8,346,137	1951C	11. Leningrad, U.S.S.R.....	2,814,000	1956*
2. New York, N. Y., U.S.A.....	7,891,957	1950C	12. Peking, China.....	2,768,149	1953*
3. Tokyo, Japan.....	6,966,499	1955C†	13. Rio de Janeiro, Brazil.....	2,725,274	1955*
4. Shanghai, China.....	6,204,417	1953C	14. Tientsin, China.....	2,693,831	1955*
5. Moscow, U.S.S.R.....	4,839,000	1956E	15. Calcutta, India.....	2,548,677	1951C
6. Chicago, Ill., U.S.A.....	3,620,962	1950C	16. Osaka, Japan.....	2,547,321	1955*
7. Buenos Aires, Argentina.....	3,555,000	1955E	17. São Paulo, Brazil.....	2,500,000	1953*
8. Berlin, Germany.....	3,369,000	1954E	18. Cairo, Egypt.....	2,367,900	1952*
9. Paris, France.....	2,850,189	1954C	19. Mexico City, Mexico.....	2,234,795	1950C
10. Bombay, India.....	2,839,270	1951C	20. Los Angeles, Calif., U.S.A.....	2,104,663	1953*

## Other Large Foreign Cities (over 560,000)

City and country	Population	Year*	City and country	Population	Year
Ahmedabad, India.....	788,333	1951C	Liverpool, England.....	789,532	1951C
• Alexandria, Egypt.....	1,070,000	1952E	Lódz, Poland.....	670,000	1955B
Amsterdam, Netherlands.....	868,579	1956E	Madras, India.....	1,416,056	1951C
Antwerp, Belgium.....	605,736	1955E	Madrid, Spain.....	1,792,961	1955B
Athens, Greece.....	565,084	1951C	Manchester, England.....	703,175	1951C
Baku, U.S.S.R.....	901,000	1956E	Manila, Philippines.....	1,158,260	1952B
Bandung, Indonesia.....	805,071	1955E	Marseilles, France.....	661,492	1954C
Bangalore, India.....	778,977	1951C	Melbourne, Australia.....	1,595,000	1955E
Bangkok, Thailand.....	620,830	1947C	Milan, Italy.....	1,264,402	1951C
Barcelona, Spain.....	1,393,022	1955E	Montevideo, Uruguay.....	810,969	1954E
Birmingham, England.....	1,112,340	1951C	• Montreal, Canada.....	1,021,520	1951C
Bogotá, Colombia.....	765,360	1954E	Mukden, Manchuria.....	1,790,000	1952E
Brussels, Belgium.....	981,636	1955E	Munich, Germany.....	870,000	1953E
Bucharest, Rumania.....	1,236,906	1956C†	Nagoya, Japan.....	1,336,779	1955C
Budapest, Hungary.....	1,781,085	1954E	• Nanking, China.....	1,020,000	1952E
Canton, China.....	1,210,000	1952E	• Naples, Italy.....	1,003,815	1951C
Capetown, South Africa.....	687,900	1956E	Novosibirsk, U.S.S.R.....	730,000	1956E
Caracas, Venezuela.....	611,048	1953E	• Port Arthur, Kwantung.....	1,010,000	1952E
Casablanca, Morocco.....	682,388	1952C	Prague, Czechoslovakia.....	932,024	1948E
— Chungking, China.....	2,000,000	1952E	Pusan, Korea.....	840,000	1953C
Cologne, Germany.....	629,200	1953E	Rangoon, Burma.....	711,250	1953C
Copenhagen, Denmark.....	957,300§	1956E	Recife, Brazil.....	560,000	1953E
Delhi, India.....	914,973	1951C	Riga, Latvia.....	640,000	1954E
Durban, U. of So. Af.....	591,300	1956E	Rome, Italy.....	1,606,739	1951C
Essen, Germany.....	624,100	1953E	Rotterdam, Netherlands.....	718,509	1956E
Frankfurt am Main, Germany.....	564,400	1953E	Saigon-Cholon, Vietnam.....	1,900,000	1955E
Genoa, Italy.....	678,200	1951C	Santiago, Chile.....	1,348,283	1952C
• Glasgow, Scotland.....	1,089,555	1951C	Seoul, Korea.....	1,300,000	1955E
Gorki, U.S.S.R.....	876,000	1956E	Sian, China.....	628,499	1948C
Hague, The, Netherlands.....	603,987	1956E	Sofia, Bulgaria.....	600,000	1953E
Hamburg, Germany.....	1,658,000	1953E	Stalino, U.S.S.R.....	625,000	1956E
• Harbin, Manchuria.....	1,000,000	1952E	Stockholm, Sweden.....	785,945	1955E
Havana, Cuba.....	1,157,445	1953C	Sverdlovsk, U.S.S.R.....	707,000	1956E
• Hyderabad, India.....	1,085,722	1951C	Sydney, Australia.....	1,897,710	1955E
Istanbul, Turkey.....	1,214,616	1955C†	Taipei, Formosa.....	670,242	.....
Jakarta, Indonesia.....	1,851,531	1955E	Tashkent, U.S.S.R.....	778,000	1956E
• Johannesburg, U. of So. Af.....	1,006,500	1956E	Tblisi, U.S.S.R.....	635,000	1956E
Kanpur, India.....	705,383	1951C	Teheran, Iran.....	618,976	1950E
Karachi, Pakistan.....	1,126,417	1951C	Toronto, Canada.....	675,754	1951C
Kharkov, U.S.S.R.....	877,000	1956E	Tsingtao, China.....	850,308	1948E
Kiev, U.S.S.R.....	991,000	1956E	Turin, Italy.....	711,492	1951C
Kobe, Japan.....	765,435	1950C	Victoria, Hong Kong.....	767,000	.....
Kuybyshev, U.S.S.R.....	760,000	1956E	Vienna, Austria.....	1,766,102	1951C
— Kyoto, Japan.....	1,204,017	1955C†	Warsaw, Poland.....	965,000	1955E
Lahore, Pakistan.....	849,476	1951C	• Wuhan, China.....	1,090,000	1952E
Leipzig, Germany.....	607,700	1953E	Yokohama, Japan.....	1,143,287	1955C
Lima, Peru.....	926,400	1952E			
Lisbon, Portugal.....	790,434	1950C			

\* E—Estimated; C—Census. † Preliminary figures. ‡ Special census conducted under direction of U. S. Bureau of Census, at city expense. § Including suburbs.

## Great Disasters

### Earthquakes and Volcanic Eruptions

- D. 79 Aug. 24, ITALY:** eruption of Mt. Vesuvius buried cities of Pompeii and Herculaneum, killing thousands.
- 55 Nov. 1, PORTUGAL:** one of the most severe of recorded earthquakes leveled Lisbon and was felt as far away as southern France and North Africa; between 10,000 and 20,000 killed in Lisbon alone.
- 83 Aug. 26-28, NETHERLANDS INDIES:** eruption of Krakatoa; violent explosions destroyed two-thirds of island. Sea waves occurred as far away as Cape Horn, and possibly England. Estimated 36,000 dead.
- 02 May 8, MARTINIQUE, WEST INDIES:** Mt. Pelée erupted and wiped out city of St. Pierre; 40,000 dead.
- 08 April 18, SAN FRANCISCO:** earthquake accompanied by fire razed more than 4 sq. mi.; more than 500 dead or missing; property damage about 250-300 millions.
- 08 Dec. 28, MESSINA, SICILY:** about 85,000 killed and city totally destroyed by one of most disastrous of recorded earthquakes.
- 23 Sept. 1, JAPAN:** earthquake destroyed third of Tokyo and most of Yokohama; more than 90,000 persons were killed.
- 1935 May 31, INDIA:** earthquake at Quetta killed an estimated 50,000.
- 1939 Jan. 24, CHILE:** earthquake razed some 50,000 sq. mi.; 30,000 persons killed.
- 1939 Dec. 27, NORTHERN TURKEY:** severe quakes destroyed city of Erzincan; about 100,000 casualties.
- 1949 Aug. 5, ECUADOR:** earthquake killed about 6,000 and razed 50 towns.
- 1950 Aug. 15, INDIA:** second heaviest earthquake on record affected 30,000 sq. mi. in Assam; 20,000-30,000 believed killed.
- 1951 Jan. 18-21, PAPUA TERRITORY, NEW GUINEA:** eruption of Mt. Lamington killed more than 3,000.
- 1954 Sept. 9, ALGERIA:** about 1,500 reported dead in Northern Algerian earthquake.
- 1955 April 1, PHILIPPINES:** about 430 killed in quakes.
- 1956 June 17, AFGHANISTAN:** about 2,000 persons were killed during 10-day series of earthquakes in vicinity of Kabul.

### Floods, Avalanches and Tidal Waves

#### WORLD

- 28 HOLLAND:** 100,000 persons reputedly drowned by sea flood in Friesland section.
- 42 CHINA:** rebels besieging Kaifeng destroyed seawall, causing flood that drowned 300,000 inhabitants.
- 87 CHINA:** hundreds of thousands of lives were reputedly lost in Honan province in overflow of Hwang Ho River.
- 96 JAPAN:** earthquake and tidal wave at Sanriku killed 27,000.
- 39 CHINA:** floods in north; casualties estimated at 10,000,000 homeless, starved or drowned.
- 46 ALASKA-HAWAII:** series of tidal waves in Pacific originating off Alaska killed about 150 in Hawaii.
- 47 JAPAN:** floods in wake of typhoon killed about 2,000 persons on Honshu Island.
- 48 TURKEY:** hundreds of persons were drowned when two rivers in southern Turkey burst their dikes.
- 48 CHINA:** about 1,000 reported dead in floods near Foochow.
- 1950 CHINA:** floods in eastern and southern China left 1,000,000 homeless and killed 500.
- 1951 ALPS:** snow avalanches killed more than 200 in Alpine regions of Switzerland, Italy, France and Austria.
- 1951 MANCHURIA:** floods killed 1,800; 3,000 missing.
- 1953 NORTHWEST EUROPE:** storm followed by floods devastated North Sea coastal areas. Netherlands was hardest hit, with 1,794 dead.
- 1953 JAPAN:** separate floods on Kyushu and Honshu islands reported to have killed about 1,300.
- 1954 IRAN:** flash flood reportedly killed 2,000 religious pilgrims.
- 1955 INDIA:** floods in Punjab, Patiala and at Delhi reported to have killed 1,700.

#### UNITED STATES

- 1889 PENNSYLVANIA:** more than 2,000 died in Johnstown flood.
- 1913 OHIO AND INDIANA:** floods of Ohio and Indiana rivers took 730 lives.



- 1927 **MISSISSIPPI VALLEY:** floods inundated 20,000 sq. mi.; 700,000 were left homeless.
- 1937 **MISSISSIPPI AND TRIBUTARY VALLEYS:** floods in the Allegheny, Mississippi, Ohio valleys killed hundreds.
- 1954 **TEXAS-MEXICO BORDER:** flood of Rio Grande river killed 50 or more persons.
- 1955 **NORTHERN CALIFORNIA, OREGON:** weeks of rains caused \$150,000,000 damage; 74 deaths.

## Tornadoes, Typhoons and Hurricanes

(For tornadoes and hurricanes in the U. S., see Pages 310-12.)

### WORLD

- 1864 Oct. 5, **INDIA:** most of Calcutta denuded by cyclone; 70,000 killed.
- 1876 Oct. 31, **INDIA:** cyclone, tidal wave swept 3,000 sq. mi.; 215,000 killed.
- 1882 June 6, **INDIA:** cyclone and tidal wave killed 100,000 in Bombay.
- 1906 **CHINA:** typhoon at Hong Kong killed about 10,000.
- 1930 Sept. 3, **SANTO DOMINGO** (now Ciudad Trujillo): hurricane killed about 2,000 and injured 6,000.
- 1934 Sept. 21, **JAPAN:** hurricane killed more than 4,000 on Honshu.
- 1935 Oct. 25, **HAITI:** hurricane, flood killed 2,000 in Jérémie and Jacmel.
- 1942 Oct. 16, **INDIA:** cyclone devastated Bengal; about 40,000 lives lost.
- 1949 Oct. 27, **INDIA:** cyclone along southern eastern coast killed about 1,000.
- 1949 Oct. 31-Nov. 2, **PHILIPPINES:** 1,000 persons believed dead following typhoon.
- 1952 Oct. 20-22, **INDO-CHINA, PHILIPPINES:** typhoons killed more than 1,000 persons.
- 1953 Sept. 25, **VIET-NAM:** typhoon killed about 1,000 dead.
- 1954 Sept. 26, **JAPAN:** typhoon off Hakodate killed 1,200-1,600.
- 1955 Sept. 19, **MEXICO:** Hurricane Humberto killed over 200 in Tampico area.

## Fires and Explosions

### WORLD

- 1666 Sept. 2, **ENGLAND:** "Great Fire of London" destroyed 13,200 houses, St. Paul's Church, 86 parish churches, etc. Damage 10 million pounds.
- 1812 Sept. 14, **RUSSIA:** fire started by Russians in Moscow after French occupation destroyed 30,800 houses.
- 1881 Dec. 8, **AUSTRIA:** about 850 died in Ring Theater fire in Vienna.
- 1917 Dec. 6, **CANADA:** explosion and fire at Halifax when ammunition ship collided with a vessel; 1,500 dead.
- 1922 **ASIA MINOR:** more than three-fifths of Smyrna destroyed by fire following Turkish occupation.
- 1948 July 28, **GERMANY:** explosion in I. G. Farben Ludwigshafen works killed hundreds, injured 6,000.
- 1949 Sept. 2, **CHINA:** fire on Chungking waterfront killed 1,700 and gutted 10,000 buildings.
- 1955 June 11, **FRANCE:** crash and explosion of racing car into crowd during Grand Prix race, Le Mans, killed 82.
- 1956 Aug. 7, **COLOMBIA:** about 1,200 reported killed when 7 army ammunition trucks exploded at Cali.
- 1871 Oct. 8, **CHICAGO:** the "Chicago Fire" which started in barn, swept 2,100 acres, burned 17,450 buildings, killed 250 persons; 196 million damage.
- 1872 Nov. 9, **BOSTON:** fire destroyed 80 buildings; 75 million damage.
- 1903 Dec. 30, **CHICAGO:** Iroquois Theater fire killed 602.
- 1904 Feb. 7, **BALTIMORE, Md.:** fire destroyed most of business section; 1 million damage.
- 1937 March 18, **NEW LONDON, TEXAS:** explosion destroyed schoolhouse; 4 children and 14 teachers killed.
- 1942 Nov. 28, **BOSTON:** Coconut Grove night club fire killed about 500.
- 1944 July 17, **PORT CHICAGO, CALIF.:** more than 300 killed in explosion of two ammunition ships.
- 1946 Dec. 7, **ATLANTA:** Fire in Winewood Hotel killed 119.
- 1947 March 25, **CENTRALIA, ILL.:** explosion in coal mine killed 111 miners.
- 1947 April 16-18, **TEXAS CITY, TEXAS:** most of city destroyed, over 500 dead following explosion on ship.
- 1951 Dec. 21, near **WEST FRANKFORT, ILL.:** 119 coal miners died in explosion.
- 1953 Oct. 16, **BOSTON, MASS.:** explosion and fire aboard U. S. aircraft carrier *Leyte* killed 37.

### UNITED STATES

- 1835 Dec. 16, **NEW YORK CITY:** 530 buildings destroyed by fire.

# Shipwrecks (not including military or naval action)

## WORLD

- 33 May 11, **LADY OF THE LAKE**: bound from England to Quebec, struck iceberg; 215 perished.
- 53 Sept. 29, **ANNIE JANE**: emigrant vessel off coast of Scotland; 348 persons died.
- 12 March 5, **PRINCIPE DE ASTURIAS**: Spanish steamer struck rock off Sebastien Pt.; 500 drowned.
- 12 April 15, **TITANIC**: sank after colliding with iceberg; 1,513 died.
- 14 May 29, **EMPRESS OF IRELAND**: sank after collision in St. Lawrence River; 1,024 perished.
- 28 Nov. 12, **VESTRIS**: British steamer sank in gale off Virginia; 110 persons died.
- 31 June 14, French excursion steamer overturned in gale off St. Nazaire; approximately 450 died.
- 39 June 1, Submarine **THETIS**: sank in Liverpool Bay, Eng.; 99 persons perished.
- 42 Oct. 2, **QUEEN MARY**: rammed and sank a British cruiser; 338 aboard the cruiser died.
- 48 Dec. 3, **KIANGYA**: Chinese refugee ship wrecked in explosion; about 1,000 believed dead.
- 49 Jan. 27, **TAIPING**: Chinese liner collided with collier and both sank; at least 600 died.
- 49 Sept. 17, **NORONIC**: Canadian Great Lakes cruise ship burned at Toronto dock; about 130 died.
- 50 Jan. 12, **TRUCULENT**: British submarine sank in Thames estuary after collision with tanker; 64 dead.
- 51 April 16, **AFFRAY**: British submarine sank in English channel; 75 dead.
- 53 Jan. 9, **CHANG TYONG-HO**: South Korean ferry foundered off Pusan; 249 reported dead.
- 53 Jan. 31, **PRINCESS VICTORIA**: British ferry sank in Irish Sea; 133 reported lost.

- 1953 Aug. 1, **MONIQUE**: French motor ship with 120 aboard disappeared in South Pacific.
- 1956 May 13, Launch capsized near Tegal, Java, in Java Sea; 73 dead.
- 1956 June 3, Steamship sank during monsoon in Bay of Bengal; about 200 drowned.
- 1956 July 25, **ANDREA DORIA**: Italian liner collided with Swedish liner *Stockholm* off Nantucket Island, Mass., sinking next day; 52, mostly passengers aboard Italian ship, dead or unaccounted for; more than 1,600 rescued.

## U. S. AND U. S. LINES

- 1865 April 27, **SULTANA**: boiler explosion on Mississippi River steamboat near Memphis; 1,450 killed.
- 1904 June 15, **GENERAL SLOCUM**: excursion steamer burned in New York Harbor; 1,021 perished.
- 1915 July 24, **EASTLAND**: Great Lakes excursion steamer overturned in Chicago River; 812 died.
- 1934 Sept. 8, **MORRO CASTLE**: about 130 killed in fire occurring off Asbury Park, N. J.
- 1939 May 23, Submarine **SQUALUS**: sank with 59 men off Hampton Beach, N. H.; 33 members of the crew were rescued.
- 1945 April 9, U. S. ship, loaded with aerial bombs, exploded at Bari, Italy; at least 360 killed.
- 1952 Jan. 10, **FLYING ENTERPRISE**: freighter sank about 35 miles off southwest England after valiant 12-day effort by captain, Henrik K. Carlsen, to save ship.
- 1952 April 26, **HOBSON**: minesweeper collided with aircraft carrier *Wasp* and sank during night maneuvers in mid-Atlantic; 176 persons were reported lost.
- 1954 Oct. 7, **MORMACKITE**: U. S. freighter capsized off Cape Henry, Va.; 37 lost.

# Aircraft Accidents (not including military or naval action)

## WORLD

- 21 Aug. 24, **ENGLAND**: ZR-2, British dirigible, broke in two on trial trip near Hull; 62 died.
- 30 Oct. 5, **FRANCE**: British dirigible, *R-101*, crashed at Beauvais; 47 died.
- 35 May 18, **U.S.S.R.**: stunt flier crashed into giant plane, the *Maxim Gorkey*; 49 killed.

- 1938 July 24, **COLOMBIA**: military plane crashed into grandstand during air review at Bogotá, killing 53.
- 1947 Feb. 15, **COLOMBIA**: Avianca airliner crashed near Bogotá; 53 persons were killed.
- 1948 Aug. 1, **ATLANTIC OCEAN**: French flying boat with 52 persons aboard disappeared.

- 1950 March 12, near CARDIFF, WALES: crash of chartered airliner killed 80.
- 1950 Nov. 13, near GRENOBLE, FRANCE: Canadian plane carrying Holy Year pilgrims crashed; 58 dead.
- 1956 Feb. 18, near VALLETTA, MALTA: Scottish airliner crash killed 50.
- 1956 Feb. 20, near CAIRO, EGYPT: desert crash of French airliner; 52 died.
- 1956 May 15, ORLEANS, QUE., CANADA: Canadian air force jet crashed into rest home; 15, including 2 crew members, died.
- 1956 June 20, off ASBURY PARK, N. J.: Venezuelan airliner exploded and fell into Atlantic, killing all 74 aboard.
- 1956 June 24, near KANO, NIGERIA: 32 dead in British airliner crash.
- U. S. AND U. S. LINES**
- 1925 Sept. 3, CALDWELL, OHIO: U. S. dirigible *Shenandoah* broke apart, killing 14.
- 1933 April 4, NEW JERSEY COAST: U. S. dirigible *Akron* crashed into sea; 73 died.
- 1937 May 6, LAKEHURST, N. J.: German zeppelin *Hindenburg* destroyed by fire at tower mooring; 36 persons were killed.
- 1947 June 13, near LEESBURG, VA.: Fifty killed in crash of airliner.
- 1947 Oct. 24, BRYCE CANYON, UTAH: airliner crashed into hillside after catching fire in midair; 52 persons were killed.
- 1949 June 7, near SAN JUAN, PUERTO RICO: crash of converted army transport into ocean killed 53; 28 rescued.
- 1949 Nov. 1, WASH., D. C.: fighter plane rammed airliner, killing 55.
- 1950 Aug. 31, near CAIRO, EGYPT: crash of U. S. airliner killed 55, including 23 Americans.
- 1951 March 23, ATLANTIC OCEAN: U. S. Air Force transport with 53 aboard disappeared.
- 1951 April 25, near KEY WEST, FLA.: Cuban airliner and U. S. Navy plane collided; 43 killed.
- 1951 June 30, ROCKY MOUNTAIN NATIONAL PARK, COLO.: airliner crash killed 50.
- 1951 Dec. 16, ELIZABETH, N. J.: nonscheduled airliner crash killed 56.
- 1952 Jan. 22, ELIZABETH, N. J.: 29 killed including former Sec. of War Robert P. Patterson, when airliner crashed into apartments; 7 were on ground.
- 1952 Feb. 11, ELIZABETH, N. J.: third major air disaster in Elizabeth within 2 months fatally injured 33.
- 1952 April 11, near SAN JUAN, PUERTO RICO: airliner crashed into sea; 17 killed, 17 rescued.
- 1952 April 29, NORTH CENTRAL BRAZIL: airliner bound for New York crashed in jungle; 50 died.
- 1952 Nov. 23, near ANCHORAGE, ALASKA: Air Force transport crash; 52 killed.
- 1952 Dec. 20, MOSES LAKE, WASHINGTON: crash of Air Force "Globemaster" killed 87 servicemen, injured 28.
- 1953 Feb. 14, GULF OF MEXICO: airliner crash during storm killed 46.
- 1953 June 18, near TOKYO, JAPAN: crash of U. S. Air Force "Globemaster" killed 129 servicemen in world's worst air disaster to date.
- 1953 July 11, PACIFIC OCEAN: airliner crashed about 325 mi. east of Wake Island; 58 persons were killed.
- 1954 Oct. 31, ATLANTIC OCEAN: U. S. naval plane with 42 aboard lost.
- 1955 March 22, near HONOLULU, HAWAII: crash of U. S. navy transport plane killed 66.
- 1955 Aug. 11, near EDELWEILER, GERMANY: two U. S. troop carriers collided; 66 air force personnel killed.
- 1955 Oct. 6, near LARAMIE, WYO.: airliner hit mountain; 66 died.
- 1955 Nov. 1, near LONGMONT, COLO.: critically-placed time-bomb destroyed airliner in flight, killing 44.
- 1955 Nov. 18, near SEATTLE, WASH.: airliner crash killed 28.
- 1956 April 1, near PITTSBURGH, PA.: died in airliner crash.
- 1956 June 30, GRAND CANYON, ARIZ.: 1 died in collision of two airliners; worst commercial air disaster to date.
- 1956 July 13, near FORT DIX, N. J.: 45 aboard killed in crash of U. S. Air Force transport.

## Railroad Accidents

### WORLD

- 1857 March 17, DES JARDINES CANAL, CANADA: train derailed on bridge; about 60 killed.
- 1864 June 29, near BELOEIL, CANADA: about 90 killed when train ran through open switch.



1879 Dec. 28, DUNDEE, SCOTLAND: train blown off Tay bridge; 73 drowned.

1881 June 24, near CUARTLA, MEXICO: about 200 died when train fell into river.

1882 July 13, near TCHEARNY, RUSSIA: more than 150 killed in derailment.

1889 June 12, near ARMAGH, IRELAND: about 80 killed in collision.

1891 June 14, near BASEL, SWITZERLAND: about 100 killed in collision.

1915 May 22, GRETNA, SCOTLAND: two passenger trains and troop train collided; 227 killed.

1938 Dec. 25, near KISHINEV, RUMANIA: about 100 killed in collision.

1939 Dec. 22, near MAGDEBURG, GERMANY: more than 125 killed in collision; 99 killed in another wreck near Friedrichshafen.

1940 Jan. 29, OSAKA, JAPAN: 200 killed in collision.

1944 March 2, near SALERNO, ITALY: 521 suffocated when Italian train stalled in tunnel.

1949 Oct. 22, near NOWY DWOR, POLAND: more than 200 reported killed in derailment of Danzig-Warsaw express.

1950 April 6, near RIO DE JANEIRO, BRAZIL: train wrecked when bridge collapsed; 108 killed or missing.

1952 March 4, near RIO DE JANEIRO, BRAZIL: about 120 reported killed in collision of 2 trains.

1952 Oct. 8, HARROW-WEALDSTONE, ENGLAND: two express trains crashed into commuter train; 112 dead.

1953 Dec. 24, near WAIOURI, NEW ZEALAND: train plunged through bridge; 155 dead and others missing.

1953 Dec. 24, near SAKVICE, CZECHOSLOVAKIA: crash of two trains reported to have killed 103.

1954 Sept. 28, near HYDERABAD, INDIA: 137 dead when train plunged into river.

UNITED STATES

1856 July 17, near PHILADELPHIA, PA.: train carrying Sunday-school children wrecked; 66 killed.

1876 Dec. 29, ASHTABULA, O.: 80 killed when train broke through bridge.

1887 Aug. 10, near CHATSWORTH, ILL.: about 80 killed in wreck.

1904 Aug. 7, near EDEN, COLO.: about 100 killed in wreck.

1910 March 1, WELLINGTON, WASH.: more than 90 killed.

1938 June 19, MILES CITY, MONT.: train ran through bridge; 47 killed.

1943 Sept. 6, PHILADELPHIA, PA.: train derailed; 79 killed.

1943 Dec. 16, near RENNERT, N. C.: 72 killed in derailment and collision.

1944 Dec. 31, near OGDEN, UTAH: 48 killed in collision.

1946 April 25, NAPERVILLE, ILL.: at least 47 killed in collision.

1950 Feb. 17, ROCKVILLE CENTRE, N. Y.: head-on crash of two commuter trains killed 30.

1950 Nov. 22, RICHMOND HILL, N. Y.: 79 died when one commuter train crashed into rear of another.

1951 Feb. 6, WOODBRIDGE, N. J.: 85 died when commuter train plunged through temporary overpass.

1956 Jan. 22, LOS ANGELES, CALIF.: train jumped track on curve; 30 killed.

America's Tallest Buildings

City	Building	No. of stories	Height, feet	City	Building	No. of stories	Height, feet
New York	Empire State	102	1,250	New York	New York Life	40	617
New York	Chrysler	77	1,046	New York	Singer	47	612
New York	60 Wall Tower	66	950	Chicago	Board of Trade	44	605
New York	Bk. of Manhattan	71	925	Chicago	Prudential	41	602
New York	R. C. A.	70	850	New York	U. S. Court House	37	590
New York	Woolworth	60	792	Pittsburgh	Gulf	44	582
New York	City Bank-Farmers Trust	57	741	New York	Municipal	40	580
Cleveland	Terminal Tower	52	708	Cincinnati	Carew Tower	48	574
New York	500 Fifth Avenue	60	700	New York	Socony Mobil	42	572
New York	Metropolitan Life	50	700	New York	Continental Bank	48	565
New York	Chanin	56	680	New York	Sherry-Netherland	40	560
New York	Lincoln	53	673	New York	N. Y. Central	35	560
New York	Irving Trust	50	654	Chicago	Pittsfield	39	557
New York	General Electric	50	641	Columbus	Lincoln-LeVeque Tower	46	556
New York	Waldorf-Astoria	47	625	Chicago	Sheraton	42	555
New York	10 E. 40th St.	48	621	Detroit	Penobscot	47	551

## Record Passages of Atlantic (Screw) Steamships since 1900

## WESTWARD PASSAGES

Date	Ship and (flag*)	European port	Time			Speed knots	Sea miles
			D.	H.	M.		
1900,01	DEUTSCHLAND (G)	Southampton	5	11	54	23.15	3,044
1907 }	LUSITANIA† (B)	Queenstown	{ ..	{ ..	{ ..	24.00	....
1910 }			{ 4	{ 11	{ 40	25.88	....
1908 }	MAURETANIA† (B)	"	4	10	41	26.06	....
1911 }	" (B)	Cherbourg	4	21	44	26.9	3,162
1929	BREMEN† (G)	"	4	17	42	27.83	....
1929	EUROPA† (G)	"	4	17	6	27.91	3,157
1930	REX† (I)	Gibraltar	4	13	58	28.92	3,181
1933	NORMANDIE† (F)	Bishop's Rock	4	3	2	29.98	3,015
1935	QUEEN MARY† (B)	"	{ 4	{ 0	{ 27	30.14	2,939
1936 }			{ 3	{ 21	{ 48	30.99	2,907
1938 }			3	12	12	34.51	2,906
1952	UNITED STATES† (US)	Bishop's Rock					

## EASTWARD PASSAGES

1900,01	DEUTSCHLAND† (G)	Eddystone Lt.	5	7	38	23.51	3,082
1904	KAISER WILHELM II† (G)	Plymouth	5	8	16	23.58	....
1907 }	LUSITANIA† (B)	Queenstown	{ ..	{ ..	{ ..	23.61	....
1910 }			{ 4	{ 15	{ 50	25.57	....
1908 }	MAURETANIA† (B)	"	4	13	41	25.89	....
1911 }	" (B)	Cherbourg	5	1	49	26.25	3,198
1924	" (B)	Plymouth	4	17	50	27.22	3,098
1929			{ 4	{ 14	{ 30	27.91	3,084
1933 }	BREMEN† (G)	Cherbourg	{ 4	{ 17	{ 43	28.14	....
1933 }			{ 4	{ 16	{ 15	28.51	3,199
1935 }	NORMANDIE† (F)	Bishop's Rock	{ 4	{ 3	{ 25	30.35	....
1937 }			{ 4	{ ..	{ 6	30.99	2,978
1936 }	QUEEN MARY† (B)	"	{ 3	{ 23	{ 57	30.63	....
1938 }			{ 3	{ 20	{ 42	31.69	2,938
1952	UNITED STATES† (US)	Bishop's Rock	3	10	40	35.59	3,144

\* (B)—British; (G)—German; (I)—Italian; (F)—French. † Vessels which have held the Blue Riband. Source: Maritime Adm.

## Leading Passenger Ships Calling at U. S. and Canadian Ports

Source: Lloyd's Register of International Shipping, 1955-56 edition, except for starred items and number of passengers.

Line	Name of ship	Flag	Length§	Tonnage**	Passengers*
American-Export.....	Constitution; Independence†	United States	682	23,719	1,000
American President.....	Pres. Cleveland; Pres. Wilson†	United States	610	15,359	830
Canadian Pacific.....	Empress of Britain	British	640*	26,000*	1,050
Cunard.....	Mauretania	British	772	35,674	1,157
	Queen Elizabeth	British	1,031	83,673	2,233
	Queen Mary	British	1,019*	81,237	1,957
French.....	Ile de France	French	793	44,356	1,262
	Liberté	French	937	51,839	1,497
Furness.....	Queen of Bermuda	British	580	22,501	731
Greek.....	New York	Greek	579	16,991	1,246
	Olympia	Liberian	611	22,979	1,307
Holland-America.....	Nieuw Amsterdam	Netherlands	759	36,667	1,228
	Ryndam	Netherlands	503	15,015	893
Italian.....	Conte Biancamano	Italian	665	23,562	1,463
	Saturnia	Italian	630	24,346	1,294
	Vulcania	Italian	631	24,456	1,270
Matson.....	Matsonia†	United States	631*	20,300*	770
Moore-McCormack.....	Argentina; Brazil†	United States	613*	20,526*	510
Norwegian-American.....	Bergensfjord	Norwegian	577*	18,500*	890
Swedish-American.....	Gripsholm†	Swedish	631*	23,000*	845
United States.....	America	United States	723*	26,314	1,046
	United States	United States	990*	53,329	1,928
Zim-Israel.....	Israel; Zion†	Israeli	504*	10,500*	312

\* Source is owner. † Sister ships. ‡ Service to begin in 1957. § Overall length in feet. \*\* Gross tonnage.

# HISTORICAL AND NEWS EVENTS

FROM ANCIENT TO MODERN TIMES

*Compiled by*

ENCYCLOPAEDIA BRITANNICA

(See also our section entitled *Headline History of Our Times*)

- Actium, Battle of** (31 B.C.). Octavius defeats Mark Anthony.
- Alexander the Great** conquers Greece, Persia, Egypt and part of India (334-323 B.C.). Major battles: Granicus (334 B.C.), Issus (333), Arbela (331).
- American Revolution** (1775-83). Outstanding events: 1775—Battle of Lexington-Concord (Apr. 19). Battle of Bunker Hill (June 17). 1776—Battle of Long Island (Aug. 27). 1777—Burgoyne surrenders at Saratoga (Oct. 17). 1781—Battle of Cowpens (Jan. 17). Battle of Yorktown (Sept. 28-Oct. 19), and British surrender by Cornwallis. 1783—Treaty signed by U. S. and Britain (Sept. 3).
- 'Babylonian Captivity' of Papacy** with seat at Avignon (1309-77).
- Bacon's Rebellion** (May 10-Oct. 18, 1676). Nathaniel Bacon leads unsuccessful insurrection in Virginia because of abuses in government administration and taxation.
- Balfour Declaration** (Nov. 2, 1917) promises Jewish homeland in Palestine.
- Balkan Wars** (1912-13). Bulgaria, Serbia, Greece and Montenegro defeat Turkey; later, Bulgaria attacks Serbia and Greece and is defeated.
- Bastille destroyed** (July 14, 1789).
- Benedictine Order** founded at Monte Cassino (c. A.D. 529).
- Bible** translated by Wycliffe into English (1382-84); Douay Version published (1582 & 1609-10); King James Version published (1611).
- Black Death** (beginning c. 1347) wipes out at least one-quarter of population of Europe.
- Black Friday** (Sept. 24, 1869). Financial panic results from gold corner in U. S.
- Boer War** (1899-1902). Boers defeated by British; sign peace treaty at Pretoria (May 31, 1902).
- Boston Massacre** (Mar. 5, 1770). British soldiers fire on Boston mob, killing 3.
- Boston Tea Party** (Dec. 16, 1773). Colonials dump tea in Boston Harbor because of tea tax.
- Boxer Rebellion** (1900). Uprising by secret society in northern China against foreigners.
- Brown, John**, and 18 followers raid Harpers Ferry (Oct. 16, 1859) and seize arsenal; taken prisoners by U. S. Marines (Oct. 18); Brown hanged (Dec. 2).
- Burr-Hamilton duel**. See Hamilton.
- Cape-to-Cairo Railroad** completed (1918).
- Carthage** founded by Phoenicians (c. 900 B.C.); destroyed by Romans (146 B.C.).
- Châlons, Battle of** (A.D. 451). Attila the Hun defeated by Romans.
- Charlemagne** crowned Emperor of the West (A.D. 800).
- Charles I** beheaded (Jan. 30, 1649). See also Great Rebellion.
- Children's Crusade** (1212). About 50,000 unarmed children set out to recover Holy Sepulchre; all lost or die on the way.
- Chinese-Japanese War** (1894-95). Japan wins Formosa, Pescadores and part of southern Manchuria; Korea becomes independent (annexed by Japan 1910).
- Christianity** made official religion of Roman Empire (A.D. 330).
- Civil War, American** (1861-65). Outstanding events: 1861—First Battle of Bull Run (July 21). 1862—*Monitor* defeats *Merrimac* (Mar. 9). Battle of Antietam (Sept. 15-17). 1863—Lincoln's Emancipation Proclamation (Jan. 1). Battle of Gettysburg (July 1-3). Grant captures Vicksburg (July 4). Battle of Lookout Mountain (Nov. 23-25). 1864—Battle of the Wilderness (May 5-6). Sherman's March through Georgia (Nov. 14-Dec. 22). 1865—Lee surrenders at Appomattox (Apr. 9).
- Code Napoléon**, unified codification of French law, adopted (1804).
- Code of Hammurabi** (c. 2300 B.C.). Oldest existing written code of laws.
- Communist Manifesto** issued by Karl Marx and Friedrich Engels (1848).
- Compromise of 1850** admits California as free state; organizes Utah and New Mexico as territories without mention



- of slavery; prohibits slave trade in D. C.; returns fugitive slaves to masters; pays Texas \$10 million for her claim to New Mexico.
- Confederacy** proclaimed by seceding states (Feb. 9, 1861); Jefferson Davis named President.
- Congress of Vienna (1814-15)**. European powers, under leadership of Metternich, meet to settle problems of territory and government resulting from Napoleonic Wars.
- Constantinople** founded (as Byzantium) by Greeks (c. 660 B.C.); made capital of Eastern Roman Empire by Constantine the Great (A.D. 330); captured by Turks (1453); renamed Istanbul (1930).
- Council of Nicaea (A.D. 325)**. Called by Constantine the Great; establishes official creed of Christianity (Nicene Creed).
- Council of Trent (1545-64)**. Called by Pope Paul III, at suggestion of Emperor Charles V, to establish Catholic Counter Reformation.
- "Coxey's Army"** (March. 25-May 1, 1894). Jacob S. Coxey leads 20,000 unemployed on Washington, D. C.
- Crimean War (1853-56)**. Russia loses claim to Greek Christians under Turkish flag.
- Crucifixion of Christ (c. A.D. 29)**. According to New Testament, Christ rose from the dead 2 days later.
- Crusades (1096-1291)**. European Christians, in 7 periods of conflict, attempt to recover Holy Land from Moslems. *See also* Children's Crusade.
- Custer massacre (June 25, 1876)**. Gen. George A. Custer and his forces killed at Battle of Little Big Horn by Sioux.
- Divine Comedy** begun by Dante (1307); probably finished in last year of his life (1321).
- Dominican Order** founded (1215).
- Dorr Rebellion (1841-42)**. Thomas W. Dorr leads unsuccessful attempt to extend franchise in Rhode Island; franchise extended 1843.
- Dred Scott case (1846)**. Dred Scott, Negro slave, sues for freedom on claim he has lived for a time on free soil; U. S. Supreme Court rules (Mar. 6, 1857) that Scott is not a citizen and has no standing in court.
- Dreyfus case (1894)**. Capt. Alfred Dreyfus found guilty of treason in France and sentenced to Devil's Island. Finally acquitted (1906).
- Easter Rebellion (April. 24, 1916)**. Irish nationalists unsuccessfully attempt to throw off British rule.
- Edict of Nantes (1598)**. Extends toleration to Huguenots (French Protestants); its revocation (1685) causes widespread persecution of Huguenots.
- Evolution trial**. *See* Scopes.
- Fawkes, Guy**. *See* Gunpowder Plot.
- Feudalism**, lord-vassal social system, established throughout Europe (9th century); begins to break up (14th-15th centuries).
- Franciscan Order** founded (1210).
- Franco-Prussian War (1870-71)**. France defeated by German states; loses Alsace-Lorraine.
- Freedom of press** established in America as John Peter Zenger, New York editor, is acquitted in libel case against Gov. Cosby (1735).
- French and Indian War**. *See* Seven Years War.
- French Revolution (1789-99)**. Outstanding events: 1789—Bastille destroyed (Jul. 14). Feudal rights abolished (Aug. 4). 1792—September Massacres (Sept. 2-6). France becomes republic (Sept. 21). 1793—Louis XVI beheaded (Jan. 21). Marie Antoinette beheaded (Oct. 16). Reign of Terror (spring 1793—summer 1794). 1795—Napoleon heads army. Directory established (Oct. 27). (Revolution merges into Napoleonic Wars.)
- Gold rush** develops as gold is discovered at Sutter's Mill, near Sacramento, Calif. (Jan. 2, 1848).
- Great Rebellion (1642-49)**. Civil wars in England. Charles I beheaded (Jan. 30, 1649); Cromwell establishes Commonwealth (1649).
- Great Wall of China** begun (255 B.C.).
- Gregorian Calendar** replaces Julian Calendar in Catholic countries (1582), in Britain and her Colonies (1752), in Russia (1918).
- Gunpowder Plot (1605)**. Guy Fawkes, agent of conspirators against King and Parliament, seized as he is about to blow up House of Lords (Nov. 5).
- Hamilton-Burr duel (July 11, 1804)** results in Hamilton's death next day.
- Hastings, Battle of (1066)**. Normans led by William the Conqueror invade England.
- Hegira (A.D. 622)**. Mohammed flees from Mecca to Medina. Year I of Mohammedan calendar.
- Holy Alliance** formed by Russia, Austria and Prussia (Sept. 26, 1815); intended to regulate government according to Christianity but actually used for repressing political liberty.
- Holy Roman Empire** founded by Otto the Great (962); dissolved by Napoleon (1805).
- Huguenots**. *See* Edict of Nantes; St. Bartholomew Massacre.

Hundred Years' War (1338-1453). England loses lands in France. Major battles: Crécy (1346), Poitiers (1356), Agincourt (1415).

Industrial Revolution begins in England (c. 1760). Machines gradually replace hand tools, bringing about vast industrial and social changes.

Inquisition established (c. 1233) to combat heresy; put under state control in Spain (1480); abolished in France (1772), in Spain (1834).

International, First (1864). Founded in London to further world socialism; dissolved in Philadelphia (1876).

International, Second (1889). Founded in Paris to celebrate 100th anniversary of French Revolution.

International, Third (1919). Founded in Moscow as protest against inactivity of Second International; dissolved (1943). Also called *Communist International* or *Comintern*.

Jamestown, Va., settled by British under Capt. John Smith (1607).

Jerusalem destroyed by Nebuchadnezzar (586 B.C.); returned to Jews by Cyrus (538 B.C.); captured by Titus (A.D. 70); captured by Crusaders (1099); captured by Saladin (1187).

Jesus (Society of Jesus) founded by Ignatius of Loyola (1534).

Joan of Arc burned at stake (1431).

Justinian Code (A.D. 529). Codification of Roman law by Byzantine Emperor Justinian.

Kansas-Nebraska Act (1854) abrogates Missouri Compromise; permits territories of Kansas and Nebraska local option on slavery question; results in rioting and bloodshed.

Leopold-Loeb case (1924). Nathan Leopold and Richard Loeb kidnap and kill Bobby Franks in Chicago (May 22); sentenced to life imprisonment (July 21); Loeb killed by fellow convict (Jan. 28, 1936); parole refused to Leopold (May 14, 1953).

Lindbergh flight (May 20-21, 1927). Charles A. Lindbergh makes first solo flight across Atlantic.

Locarno Conferences (Oct. 1925) seek to insure peace and preserve boundaries in Europe by mutual guarantees.

Louis XVI beheaded (Jan. 21, 1793). See also French Revolution.

Magna Carta, charter listing rights and privileges of English barons, proclaimed at Runnymede (June 15, 1215); King John forced by barons to accept it.

Manhattan Island purchased by Peter Minuit from Indians (1626) for trinkets worth 60 guilders (about \$24).

Mary, Queen of Scots, convicted in England (1586) of being accomplice in plot to murder Queen Elizabeth; beheaded (Feb. 8, 1587).

Maximilian, Emperor of Mexico, executed by Benito Juárez (June 19, 1867) after Napoleon III of France withdraws support of Mexican empire.

Merrimac. See Monitor.

Mexican War (1846-1848) ends in American victory; Treaty of Guadalupe Hidalgo signed (1848).

Ming Dynasty (1368-1644). Noted for great development of culture and art in China.

Missouri Compromise (1820) admits Maine as free state, Missouri as slave state; slavery prohibited in Louisiana Territory north of 36° 30'. See also Kansas-Nebraska Act.

Monitor, Union ship, defeats Merrimac, Confederate ship (Mar. 9, 1862).

Mooney, Tom, sentenced to death for bomb explosion in San Francisco during Preparedness Day Parade (1916); sentence commuted to life (1918); freed (1939).

Mormonism (Church of Jesus Christ of Latter-day Saints) founded by Joseph Smith at Fayette, N. Y. (Apr. 6, 1830).

Moses leads Jews out of Egypt (c. 1300 B.C.).

Napoleonic Wars (1796-1815). Outstanding events: 1798—Campaign in Egypt. 1805—Nelson defeats French at Battle of Trafalgar (Oct. 21). French defeat Russians and Austrians at Battle of Austerlitz (Dec. 2). 1813—French defeated in Battle of Leipzig (Oct. 16-19). 1814—Napoleon abdicates (Apr. 11); sent to Elba. 1815—Napoleon flees Elba (Feb. 26). Napoleon defeated in Battle of Waterloo (June 18). See also Congress of Vienna.

Northwest Ordinance (1787). Adopted for territory north of Ohio River. Establishes method for admitting new states; prohibits slavery in territory.

Orthodox Eastern Church excommunicated by Pope Leo IX (1054); schism final between Western and Eastern Churches.

Parliament established in England (1295).

Peloponnesian War (431-404 B.C.). Sparta under Lysander defeats Athens.

Persian Wars (499-478 B.C.). Greece defeats Persia. Major battles: Marathon (490 B.C.), Thermopylae (480), Salamis (480), Plataea (479), Mycale (479).

Pilgrims land at Plymouth Rock (Dec. 21, 1620).

Plague in London ("Great Plague") causes 68,596 deaths (1665).

Plymouth Rock. See Pilgrims.

- Poland partitioned out of existence among Prussia, Russia and Austria (1772, 1793, 1795).
- Pony Express (1860-61). Between St. Joseph, Mo., and Sacramento, Calif.
- Pullman strike (June-July 1894). Strike smashed by Federal troops; Eugene V. Debs jailed for contempt.
- Punic Wars (264-146 B.C.). Romans defeat Carthaginians and destroy Carthage (146 B.C.). Major battles: Cannae (216 B.C.), Zama (202).
- Rasputin ("Black Monk"), confessor to Tsarina, murdered (Dec. 31, 1916).
- Reformation (beginning 16th century). Outstanding events: Luther nails his 95 theses to church door at Wittenberg, Germany (1517). Zwingli begins Reformation in Switzerland (1519). Luther burns papal bull and canon law (1520). Calvin publishes *Institutes of the Christian Religion* (1536). Act of Supremacy makes King head of Church of England (1534). Calvin organizes Geneva as theocratic state (1541). Knox establishes Presbyterian Church in Scotland (1560).
- Renaissance (14th-16th centuries). Revival of classical learning in Europe stimulates vigorous activity in arts, literature, humanities, etc.
- Roman Empire established under Augustus (27 B.C.); divided into Western and Eastern Empires (A.D. 395); Western Empire falls (476); Eastern Empire falls with capture of Constantinople (1453).
- Rome founded, according to legend, by Romulus (753 B.C.); burned, perhaps by Nero (A.D. 64); sacked by Visigoths under Alaric (410); sacked by Vandals under Genseric (455).
- Russo-Japanese War (1904-05). Port Arthur surrenders to Japanese (Jan. 2, 1905); Treaty of Portsmouth, N. H. (Sept. 5).
- Russo-Turkish War (1877-78). Power of Turkey in Europe broken; redivision of southeastern Europe at Congress of Berlin (June 13-July 13, 1878).
- St. Bartholomew, Massacre of (Aug. 24-Oct. 3, 1572). Some 50,000 Huguenots (French Protestants) killed in Paris and provinces at instigation of Catherine de Médicis.
- St. Valentine's Day Massacre (Feb. 14, 1929). 6 members of Moran gang lined up against wall by rival gang and shot.
- Savonarola, Florentine priest and dictator, tried for sedition and heresy (1498); hanged and burned (May 23).
- Scopes Evolution Trial held at Dayton, Tenn. (July 10-21, 1925). John T. Scopes prosecuted by William Jennings Bryan for teaching evolution in Tennessee school; defended by Clarence Darrow.
- Scopes convicted but decision later set aside.
- Seven Years' War (1756-63). France, Austria, Sweden, Russia vs. England and Prussia. Clive defeats French at Battle of Plassey (1757), giving British supremacy in India; England wins Canada; Prussia retains Silesia. (American phases of war known as French and Indian War, 1754-63.)
- Shays' Rebellion (1786). Capt. Daniel Shays leads unsuccessful insurrection against Massachusetts government because of economic crisis.
- Slavery in British Empire abolished by Parliament (1833).
- Slavery introduced into American Colonies at Jamestown, Va. (1619); abolished in U. S. by 13th Amendment (1865).
- Snyder-Gray case (1927). Ruth Snyder and Judd Gray murder her husband, Albert Snyder (Mar. 20); both executed at Sing Sing (Jan. 12, 1928).
- Spanish-American War (1898). Outstanding events: U. S. battleship *Maine* blown up in Havana harbor (Feb. 15). Dewey destroys Spanish fleet at Manila (May 1). Charge of San Juan Hill (July 1). Cervera's fleet destroyed off Santiago, Cuba, by U. S. ships (July 3). Treaty of Paris (Dec. 10).
- Spanish Armada destroyed by British (1588).
- Spartacus, Roman slave and gladiator, leads unsuccessful slave insurrection (73-71 B.C.).
- Stamp Act (effective Nov. 1, 1765). First direct tax placed on America by Britain; protested by Stamp Act Congress in New York (Oct. 7-25); repealed by Britain (Mar. 18, 1766).
- Sutter's Mill. See Gold.
- Texan war of independence from Mexico (1836). Major battles: Alamo (Mar. 6). San Jacinto (Apr. 21).
- Thaw-White case (1906). Harry K. Thaw, millionaire, murders Stanford White, noted architect, in Madison Square Garden (June 25).
- Thirty Years' War (1618-1648). England, Holland, France, Sweden and German Protestants against Spain, Italy and German Catholics; Peace of Westphalia ends conflict, Alsace going to France. Swiss independence being recognized, and German secularized states being given religious freedom.
- Tours, Battle of (A.D. 732). Charles Martel defeats Moslems, checking their advance in western Europe. Also called Battle of Poitiers.
- Trojan War (c. 1200 B.C.). Greeks defeat Trojans; destroy city of Troy.



**Tutankhamen's tomb** discovered near Luxor by Lord Carnarvon and Howard Carter (1922).

**Tweed Ring**, corrupt New York political group headed by Wm. Marcy Tweed, Tammany Boss, broken up (1872); Tweed convicted (Nov. 5).

**War of 1812 (1812-1815)**. Outstanding events: 1813—Battle of Lake Erie (Sept. 10). 1814—British burn White House at Washington (Aug. 24-25). Battle of Lake Champlain (Sept. 11). U. S. signs treaty with Britain at Ghent (Dec. 24). 1815—Battle of New Orleans (Jan. 8). (Slowness of communications was responsible for continuation of hostilities after treaty.)

**Wars of the Roses (1455-85)**. House of York (white rose) against House of Lancaster (red rose). Richard III slain at Battle of Bosworth Field (1485); Tudor line started by Henry VII.

**Whisky Insurrection (July-Nov. 1794)**. Farmers in western Pennsylvania revolt unsuccessfully against excise tax of 1791.

**Witch trials** in Salem, Mass., result in death sentences for 19 women by Judge Samuel Sewall (1692).

**Woman suffrage** first granted in U. S. by Wyoming Territory (1869).

**World War I (1914-18)**. Central Powers (Austria-Hungary, Germany, Bulgaria, Turkey) vs. Allies (U. S., Britain, France, Russia, Belgium, Serbia, Greece, Rumania, Montenegro, Portugal, Italy, Japan). Outstanding events: 1914—Austria declares war on Serbia (July 28). Germany declares war on Russia (Aug. 1) and on France (Aug. 3). Germany invades Belgium (Aug. 4). Britain declares war on Germany (Aug. 4). Germans defeat Russians at Tannenberg, East Prussia (Aug. 31). First Battle of the Marne (Sept. 5-12). 1915 Dardanelles campaign against Turkey fails. 1916—Battle of Jutland (May 31). Battles of the Somme (July-Nov.). Germans turned back at Verdun (Sept. 3). Rumania overrun by Central Powers; fall of Bucharest (Dec. 6). 1917—Germany begins unrestricted submarine warfare. U. S. declares war (Apr. 6). Battle of Caporetto (Oct. 24-Dec. 26). 1918—Second Battle of the Somme (Aug. 21-Sept. 3). Third Battle of the Aisne (May 27-June 6). Second Battle of the Marne (July 15-Aug. 7). U. S. troops take St. Mihiel (Sept. 13). Battle of the Meuse-Argonne (Sept. 20-Nov. 11). Allies break Hindenburg line (Oct. 5). Armistice signed (Nov. 11).

**Zenger case**. See Freedom of press.

## Firsts in America

**Admiral in U. S. Navy**: David Glasgow Farragut, 1866.

**Air-mail route**, first transcontinental: Between New York City and San Francisco, 1920.

**Assembly, representative**: House of Burgesses, founded in Virginia, 1619.

**Bank established**: Bank of North America, Philadelphia, 1781.

**Birth in America of English parents**: Virginia Dare, born Roanoke Island, N. C., 1587.

**Botanic garden**: Established by John Bartram in Philadelphia, 1728. (Oldest existing one was established in Cambridge, Mass., in 1807.)

**Cartoon, colored**: "The Yellow Kid," by Richard Outcault, in *New York World*, 1895.

**College to confer degrees on women**: Oberlin (Ohio) College, 1841.

**College to establish coeducation**: Oberlin (Ohio) College, 1833.

**Electrocution of a criminal**: William Kemmler in Auburn Prison, Auburn, N. Y., Aug. 6, 1890.

**Execution for murder**: John Billington, Massachusetts, 1630.

**Five and Ten Cents Store**: Founded by Frank Woolworth, Utica, N. Y., 1879 (moved to Lancaster, Pa., same year).

**Fraternity**: Phi Beta Kappa; founded Dec. 5, 1776, at College of William and Mary.

**Law to be declared unconstitutional** by U. S. Supreme Court: Judiciary Act of 1789. Case: Marbury vs. Madison, 1803.

**Library, circulating**: Philadelphia, 1731.

**Newspaper**: *The Boston News-Letter*, April, 1704.

**Newspaper, illustrated daily**: *New York Daily Graphic*, 1873.

**Newspaper published daily**: *Pennsylvania Packet and General Advertiser*, Philadelphia, Sept., 1784.

**Newsreel**: Pathé Frères of Paris, in 1910, circulated a weekly issue of their *Pathé Journal*.

**Oil well, commercial**: Titusville, Pa., 1859.

**Panel quiz show on radio**: *Information Please*, May 17, 1938.

**Postage stamps issued**: 1847.

**President pro tempore of the U. S. Senate:** John Langdon, of New Hampshire, 1789.

**Railroad, transcontinental:** Central Pacific and Union Pacific railroads joined near Ogden, Utah, May 10, 1869.

**Savings bank:** The Provident Institute for Savings, Boston, 1816.

**Science museum:** Founded by Charleston (S. C.) Library Society, 1773.

**Skyscraper:** Home Insurance Co., Chicago, 1885 (10 floors, 2 added later).

**Slaves brought into America:** At Jamestown, Va., 1619, from a Dutch ship.

**Sorority:** Kappa Alpha Theta, at De Pauw University, 1870.

**State to abolish capital punishment:** Michigan, 1847.

**State to enter Union after original 13:** Vermont, 1791.

**State to ratify U. S. Constitution:** Delaware, Dec. 7, 1787.

**Steam-heated building:** Eastern Hotel, Boston, 1845.

**Steam railroad:** Baltimore & Ohio, 1830.

**Strike on record by union:** Journeymen Printers, New York, 1776.

**Subway:** Opened in Boston, 1897.

**"Tabloid" picture newspaper:** *The Illustrated Daily News* (now *The Daily News*), New York City, 1919.

**Vaudeville theater:** Gaiety Museum, Boston, 1883.

**Woman cabinet member:** Frances Perkins, Secretary of Labor, 1933.

**Woman candidate for President:** Belva Ann Bennett Lockwood, National Equal Rights party, 1884.

**Woman doctor of medicine:** Elizabeth Blackwell; received M.D. from Geneva Medical College of Western New York, 1849.

**Woman elected governor of a state:** Mrs. Nellie Tayloe Ross, Wyoming, 1925.

**Woman elected to U. S. Senate:** Mrs. Hattie Caraway, Arkansas; elected Nov. 1932.

**Woman graduate of law school:** Mrs. Ada H. Kepley, Union College of Law, Chicago, 1870.

**Woman member of U. S. House of Representatives:** Jeannette Rankin; elected Nov. 1916.

**Woman member of U. S. Senate:** Mrs. Rebecca Latimer Felton of Georgia; appointed Oct. 3, 1922.

**Woman suffrage granted:** Wyoming Territory, 1869.

**Written constitution:** *Fundamental Orders of Connecticut*, 1639.

**Zoo:** Philadelphia, 1874.

## Societies and Foundations

**AMERICAN BIBLE SOCIETY:** Founded 1816 to translate, publish and encourage wider distribution of Holy Scriptures.

**BOY SCOUTS OF AMERICA:** Founded 1910. Purpose is to promote character development, citizenship and physical fitness for boys.

**CAMP FIRE GIRLS, INC.:** Founded 1910. Purpose is to perpetuate spiritual ideals of the home and to stimulate and aid in formation of habits making for health and character.

**CARNEGIE CORPORATION OF NEW YORK:** Founded 1911 by Andrew Carnegie. Purpose is to advance and diffuse knowledge and understanding among people of U. S. and British Commonwealth. Grants are awarded to colleges and organizations engaged in research. Assets (1955): \$178,000,000 (cost balance).

**CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE:** Founded 1910 by Andrew Carnegie. Purpose is to work toward international peace through research, publications and other educational activities. Assets (June 30, 1955): \$16,887,915.

**COMMONWEALTH FUND:** Founded 1918 by Mrs. Stephen V. Harkness. Purpose is to promote health through grants for

medical education, research, etc. Endowment (1956): \$80,000,000.

**ELKS, BENEVOLENT AND PROTECTIVE ORDER OF:** Founded 1868. Purpose is to practice charity, justice, brotherly love and faithfulness. Charitable expenditures (1954): \$7,000,000 for cerebral palsy, blood banks, etc.

**FIELD FOUNDATION, INC.:** Founded 1940 by Marshall Field. Present purpose is to promote the welfare of children and improve intercultural and interracial relations through grants in the charitable, scientific and educational fields. Assets (1956): Over \$17,000,000.

**FORD FOUNDATION:** Founded 1936 by Henry Ford and his family. Purpose is to devote resources to programs for advancement of peace, education, behavioral sciences, democratic institutions and economic stability. Total assets (1955): \$580,918,567.

**FREEMASONRY:** Introduced into American Colonies before 1730. Purpose is the moral and spiritual elevation of its members and, through them, of mankind. Masonic orders in U. S. include: Royal Arch, Knights Templar, Scottish Rites. Side orders: Order of the Eastern Star, Ancient Arabic Order, Nobles of the

**Mystic Shrine for North America, Mystic Order of Veiled Prophets of the Enchanted Realm, Ancient Order of Sciots, Tall Cedars of Lebanon, Order of De Molay** for boys.

**GIRL SCOUTS OF THE U.S.A.:** Founded 1912. Purpose is to help girls develop as happy, resourceful individuals.

**GUGGENHEIM (JOHN SIMON) MEMORIAL FOUNDATION:** Founded 1925. Purpose is to offer fellowships in all fields. Endowment (1955): \$44,000,000.

**INFANTILE PARALYSIS, NATIONAL FOUNDATION FOR:** Founded 1938 by Franklin D. Roosevelt, with Basil O'Connor (volunteer president) and friends. Purpose is to direct and unify fight on every phase of infantile paralysis through research, education, direct help and prevention. Funds raised by "March of Dimes." Financed research resulting in development of Salk vaccine, 1953-55.

**KELLOGG FOUNDATION:** Founded 1930 by W. K. Kellogg. The Foundation operates by making grants to organizations for the development and implementation of experimental programs in the health, agricultural and educational fields. Assets (Aug. 31, 1955): \$71,361,887, book value; \$124,257,200, market value.

**KIWANIS INTERNATIONAL:** Founded 1915 to render service to youth, community and nation. Clubs are located in U.S., Canada, Alaska and Hawaii.

**NIGHTS OF COLUMBUS:** Founded 1882. Purpose is to render mutual aid to its sick and needy members; promotes social and intellectual intercourse among its members and conducts educational, charitable and religious work.

**KNIGHTS OF PYTHIAS:** Founded 1864. Purpose is to promote social and fraternal well-being of its members. Auxiliary bodies: Dramatic Order of Knights Khorassan, Junior Order of Princes of Syracuse, Order of Pythian Sisters.

**LIONS CLUBS, INTERNATIONAL ASSOCIATION OF:** Founded 1917. Purpose is to recognize community needs and develop means of meeting them directly or by co-operating with other agencies.

**NATIONAL GEOGRAPHIC SOCIETY:** Founded 1888. Purpose is to increase and

diffuse geographic knowledge. Publishes monthly *National Geographic Magazine*. **ODD FELLOWS, INDEPENDENT ORDER OF:** Introduced into U. S. in 1819. Purpose is to promote social relations and to provide benefits for members.

**ROCKEFELLER FOUNDATION:** Founded 1913. Purpose is to promote well-being of mankind by grants to institutions or agencies in fields of medical education and public health, biological and medical research, agriculture, social sciences and humanities. Assets (Dec. 31, 1955): \$547,-450,313, market value.

**ROTARY INTERNATIONAL:** Founded 1905. Purpose is to foster the ideal of service in business and community life and promote international understanding.

**RUSSELL SAGE FOUNDATION:** Founded 1907 by Mrs. Russell Sage. Purpose is improvement of social and living conditions in U.S. Program emphasizes social science research. Assets (Sept. 1955): \$22,000,000.

**SLOAN FOUNDATION, INC., ALFRED P.:** Founded 1934 by Alfred P. Sloan, Jr. Purpose is to increase and spread economic knowledge and promote basic scientific research. The Foundation established the School of Industrial Management at Massachusetts Institute of Technology and the Sloan-Kettering Institute for Cancer Research. Assets (Dec. 1955): \$77,713,118.

**TWENTIETH CENTURY FUND:** Founded 1919 by Edward A. Filene. Purpose is to promote research and public education on current economic and social problems, America's needs and resources, world population and production, foreign trade, farm policies, etc. Assets (Dec. 31, 1955): \$13,913,297.

**YOUNG MEN'S CHRISTIAN ASSOCIATION:** Founded 1844. Purpose is to improve spiritual, social, recreational and physical lives of young people. Endowment (1955): \$57,695,300.

**YOUNG WOMEN'S CHRISTIAN ASSOCIATION OF THE U.S.A.:** Founded 1858 to advance physical, social, intellectual and spiritual interests of young women and to build fellowship of women devoted to pursuit of Christian ideals.

## Longest Broadway Runs

Source: *Variety*.

1. Life with Father .....	3,224
2. Tobacco Road .....	3,182
3. Abie's Irish Rose .....	2,327
4. Oklahoma! .....	2,248
5. South Pacific .....	1,925
6. Harvey .....	1,775
7. Born Yesterday .....	1,642
8. The Voice of the Turtle .....	1,557
9. Arsenic and Old Lace .....	1,444
10. Helzapoppin .....	1,404

## Top Grossing Films\*

As of Jan. 4, 1956. Source: *Variety*.

1. Gone With the Wind .....	\$33,500,000
2. The Robe .....	17,000,000
3. Greatest Show on Earth ..	12,800,000
4. From Here to Eternity ....	12,500,000
5. This Is Cinerama .....	12,500,000
6. White Christmas .....	12,000,000
7. Duel in the Sun .....	11,300,000
8. Best Years of Our Lives ..	11,300,000
9. Quo Vadis .....	10,500,000
10. Cinerama Holiday .....	10,000,000

\* Figures are rentals collected by film distributors from exhibitors in U.S. and Canada.



# AMERICAN ECONOMY



**A**LTHOUGH WE account for only 7% of the world's population, we own almost 50% of its wealth. We make, grow, build, sell, buy and use more goods and services than any other country in the world. Of our population of over 167 million people, about 66 million are employed, and almost 38 million are enrolled in our schools (1954-55). Each year we spend more than \$254 billion on personal goods and services, of which \$81 billion go for food, tobacco and alcohol alone. According to the American Automobile Association, we spend \$9.2 billion on vacations every year. Our personal savings amounts to almost \$19 billion annually, in addition to

which 4 out of every 5 families are covered by life insurance. Of our 50 million dwelling units, 55% are occupied by their owners. The millions of acres of fertile farmland produce more food than we can eat. Our productive capacity is the largest in the world: we own 29% of the world's railroad mileage, 74% of its automobiles, 52% of its trucks, 47% of its radios, 46% of its electric power output, 52% of its steel. Our natural resources are tremendous: each year we produce 53% of the world's output of petroleum and about 36% of its coal. Our merchant fleet have outstripped Britain's, and we have the greatest volume of foreign trade.

## Gross National Product or Expenditure (in millions of dollars)

Source: U. S. Department of Commerce.

Item	1929	1933	1938	1945	1948	1951	1955	1958*
Gross national product.....	104,436	55,964	85,227	213,558	257,325	328,232	390,860	405,850
GNP in constant (1947) dollars.....	149,300	103,700	145,900	263,100	243,900	282,900	322,400	
Personal consumption expenditures.....	78,952	46,392	64,641	121,699	177,609	208,342	253,971	262,700
Durable goods.....	9,212	3,469	5,686	8,105	22,214	27,148	35,671	34,100
Nondurable goods.....	37,677	22,251	33,985	73,222	98,741	111,054	126,151	131,400
Services.....	32,063	20,672	24,970	40,372	56,654	70,140	92,149	97,200
Gross private domestic investment.....	16,231	1,391	6,661	10,430	41,176	56,864	60,557	63,650
New construction.....	8,707	1,431	3,960	3,833	17,904	23,332	32,734	32,850
Producers' durable equipment.....	5,850	1,589	3,644	7,654	19,110	23,177	23,658	26,950
Change in business inventories.....	1,674	-1,629	-943	-1,057	4,162	10,355	4,165	3,800
Net foreign investment.....	771	150	1,109	-1,438	1,956	227	-470	900
Government purchases.....	8,482	8,031	12,816	82,867	36,584	62,799	76,202	78,600
Federal.....	1,311	2,018	5,280	75,923	21,019	40,995	46,742	46,250
National security.....	1,344	2,022	5,286	.....	15,984	37,260	41,223	40,600
Other.....					5,570	4,154	5,945	.....
Less: Government sales.....	33	4	6	2,158	535	419	426	.....
State and local.....	7,171	6,013	7,536	8,071	15,565	21,804	30,060	32,635

\* First half at annual rate, seasonally adjusted. † Less government sales.

## National Income by Distributive Shares (in millions of dollars)

Source: U. S. Department of Commerce.

Type of share	1929	1933	1939	1945	1948	1951	1953	1955	1958 % of total
National income.....	87,814	40,159	72,753	181,248	221,641	277,041	302,129	324,048	100.0
Compensation of employees.....	51,085	29,539	48,108	123,181	140,927	180,420	208,069	223,192	68.9
Wages and salaries.....	50,423	28,997	45,941	117,577	135,172	170,881	197,287	210,354	64.9
Supplements to wages and salaries.....	662	542	2,167	5,604	5,755	9,539	10,782	12,838	4.0
Income of unincorporated enterprises and inventory valuation adjustment.....	14,759	5,599	11,610	30,835	38,389	40,809	39,171	39,019	12.0
Business and professional.....	8,791	3,166	7,293	19,011	21,649	24,791	25,908	27,339	8.8
Farm.....	5,968	2,433	4,317	11,824	16,740	16,018	13,263	11,680	3.6
Rental income of persons.....	5,425	1,971	2,742	5,634	7,198	9,129	10,152	10,076	3.2
Corporate profits and inventory valuation adjustment.....	10,100	-1,992	5,689	18,413	30,619	39,913	36,042	40,928	12.6
Net interest.....	6,445	5,042	4,604	3,185	4,508	6,770	8,695	10,833	3.3

## How Consumers Spend Their Dollar

Source: U. S. Department of Commerce.

Group	(in millions of dollars)									1955 % of total
	1929	1932	1939	1945	1947	1949	1950	1953	1955	
Food, alcohol and tobacco .....	21,374	12,719	21,072	45,924	60,483	63,145	65,606	77,188	81,421	32.2
Clothing, accessories, and jewelry .....	11,018	5,973	8,299	20,247	23,144	23,007	23,062	24,665	25,648	10.2
Personal care .....	1,116	817	1,004	2,077	2,261	2,216	2,303	2,728	3,182	1.4
Housing .....	11,421	8,964	8,940	12,205	14,603	18,080	20,210	27,572	30,592	12.1
Household operation .....	10,509	6,675	9,461	14,865	22,717	23,540	26,412	30,190	33,835	12.4
Medical care and death expenses .....	3,620	2,575	3,386	5,902	7,812	8,885	9,518	11,266	12,500	5.0
Personal business .....	5,221	3,111	3,725	4,787	6,232	7,576	8,706	10,659	12,824	5.1
Transportation .....	7,496	3,924	6,250	6,694	14,876	19,274	22,570	26,994	32,373	12.8
Recreation .....	4,327	2,439	3,446	6,314	9,733	10,276	11,347	11,832	13,034	5.2
Private education and research .....	664	571	628	871	1,316	1,663	1,794	2,444	2,905	1.2
Religious and welfare activities .....	1,196	973	938	1,572	1,589	1,762	1,859	2,978	3,356	1.5
Foreign travel and remittances—net. ....	799	467	317	1,621	804	1,164	1,163	2,026	2,301	.9
Total consumer outlay .....	78,761	49,208	67,466	123,079	165,570	180,588	194,550	230,542	253,971	100.0

## Consumers' Price Index (1947-49 = 100)

Source: U. S. Bureau of Labor Statistics.

Items	1947	1948	1951	1953	1955	1956*
All items .....	95.5	102.8	111.0	114.4	114.5	114.8
Total food .....	95.9	104.1	112.6	112.8	110.9	109.5
Apparel .....	97.1	103.5	106.9	104.8	103.7	104.6
Housing total .....	95.0	101.7	112.4	117.7	120.0	120.7
Rent .....	94.4	100.7	113.1	124.1	130.3	131.7
Gas and electricity .....	97.6	100.0	103.1	106.6	110.7	111.7
Solid fuels and fuel oil .....	88.8	104.4	116.4	123.9	125.2	129.5
Housefurnishings .....	97.2	103.2	111.2	107.9	104.1	102.6
Household operation .....	97.2	102.6	109.0	115.3	119.1	121.7
Transportation .....	90.6	100.9	118.4	129.7	126.4	126.7
Medical care .....	94.9	100.9	111.1	121.3	128.0	131.3
Personal care .....	97.6	101.3	110.5	112.8	115.3	119.1
Feeding and recreation .....	95.5	100.4	106.5	108.0	106.6	107.8
Other goods and services .....	96.1	100.5	109.7	118.2	120.2	121.2

\* Average of first 5 months.

U. S. Consumption of Principal Foods\*  
(in pounds per capita)

Source: U. S. Department of Agriculture.

Foods	1935-39 avg.	1947-49 avg.	1956 <sup>3</sup>
Red meats .....	125.3	146.4	162.0
Poultry meats .....	15.3	21.7	28.9
Eggs <sup>1</sup> .....	296.0	380.0	365.0
Fluid milk and cream .....	330.0	359.0	356.0
Cheese .....	5.5	6.9	7.8
Butter .....	16.8	10.5	9.1
Margarine .....	2.8	5.5	8.0
Fats and oils <sup>2</sup> .....	28.9	28.9	31.4
Fresh fruits .....	137.1	130.3	100.0
Processed fruits <sup>4</sup> .....	25.1	41.5	46.4
Fresh vegetables .....	139.0	150.0	143.0
Processed vgs. <sup>4</sup> .....	30.0	41.4	42.0
Potatoes, sweetpots. ....	149.3	124.3	107.1
Sugar .....	96.7	93.5	95.0
Corn products .....	37.4	33.5	30.5
Wheat flour .....	157.0	135.0	120.0
Coffee .....	13.9	18.0	15.4
Cocoa .....	4.3	4.0	4.1

<sup>1</sup> Number, not pounds. <sup>2</sup> Excludes butter and margarine. <sup>3</sup> Preliminary estimates. <sup>4</sup> Pack year. \* Civilian consumption only.

## Consumer Credit

(in millions of dollars)

Source: Federal Reserve Board.

End of year	Total	Install- ment credit	Non-install- ment credit*	Charge accounts
		ment credit	credit*	
1929 .....	6,444	3,151	1,691	1,602
1932 .....	3,567	1,521	1,026	1,020
1935 .....	4,911	2,694	1,034	1,183
1939 .....	7,222	4,503	1,305	1,414
1940 .....	8,338	5,514	1,353	1,471
1943 .....	4,901	2,136	1,325	1,440
1944 .....	5,665	2,462	1,591	1,612
1946 .....	8,384	4,172	2,136	2,076
1949 .....	17,104	11,516	2,908	2,680
1950 .....	20,813	14,490	3,317	3,006
1952 .....	25,827	18,684	3,801	3,342
1953 .....	28,896	21,807	3,840	3,249
1954 .....	30,125	22,467	4,140	3,518
1955 .....	36,225	27,895	4,533	3,797
1956† .....	36,574	28,591	4,848	3,135

\* Single-payment loans and service credit. † End of May, preliminary.

# Minutes of Working Time Required for Purchase Per Pound of Selected Foods

Source: U. S. Bureau of Labor Statistics.

Food	United States Sept. 1951	France (Paris) Oct. 1951	Germany Sept. 1951	Ireland Aug. 1951	Italy Sept. 1951	Norway Aug. 1951	Switzerland Oct. 1951	U.S.S.R. (Moscow Area) Apr. 1952
Flour, wheat.....	4	20	15	6	15	6	18	27
Macaroni.....	8	...	...	...	20	17	...	45
Rice.....	6	33	...	...	17	17	16	91
Bread.....	6	9	12	8	13	7	7	14
Beef, average.....	31	126	...	72	128	58	...	132
Pork chops.....	32	91	87	68	124 <sup>1</sup>	59 <sup>1</sup>	97	220 <sup>1</sup>
Veal, average.....	48	120	94	...	...	48	100	...
Lamb, leg.....	31	133	...	76	...	61	85	140
Fish (fresh, frozen)...	18	33	31	42	65	18	...	135
Butter.....	30	135	115	83	162	63	117	270
Cheese.....	22	104	...	60	109	38	35	...
Milk, fresh <sup>2</sup> .....	8	16	15	16	20	9	12	42
Eggs <sup>3</sup> .....	32	118	125	109	126	82	97	187
Fresh apples.....	4	19	16	...	...	...	9	89
Cabbage.....	2	7	...	...	...	5	6	37
Carrots.....	5	9	8	...	...	12	7	9
Potatoes.....	2	3	3	5	5	3	4	9
Coffee.....	32	175	585	...	250	68	122	531
Tea.....	49	...	...	74	...	228	188	960
Oleomargarine.....	13	64	39	55	...	19	...	152
Sugar.....	4	21	21	9	37	7	14	110

<sup>1</sup> Pork, average. <sup>2</sup> Quart. <sup>3</sup> Dozen.

## New Construction Activity, by Type (in millions of dollars)

Source: U. S. Department of Commerce and U. S. Department of Labor.

Activity	1929	1933	1940	1945	1949	1953	1955 <sup>1</sup>
Total new construction activity.....	10,793	2,879	8,682	5,633	22,789	35,271	42,991
New private construction activity.....	8,307	1,231	5,504	3,235	16,384	23,877	30,571
Residential (nonfarm).....	3,625	470	2,985	1,100	8,267	11,930	16,591
New dwelling units.....	3,040	290	2,560	720	7,257	10,555	14,991
Additions and alterations.....	340	145	335	340	825	1,108	1,261
Nonhousekeeping.....	245	35	90	40	185	267	331
Nonresidential building, except farm and public utility ..	2,694	406	1,025	1,020	3,228	5,680	7,611
Industrial.....	949	176	442	642	972	2,229	2,391
Commercial <sup>1</sup> .....	1,135	130	348	203	1,027	1,791	3,041
Other.....	610	100	235	175	1,229	1,660	2,171
Public utility.....	1,578	261	771	827	3,323	4,146	4,601
Railroad.....	510	94	167	264	352	442	371
Telephone and telegraph.....	354	45	122	117	533	615	801
Other public utility.....	714	115	482	446	2,438	3,359	3,421
Farm construction.....	307	49	240	267	1,488	1,731	1,601
All other private.....	103	45	33	21	78	120	161
New public construction activity.....	2,486	1,648	3,628	2,398	6,405	11,394	12,411
Residential.....	...	...	200	80	359	556	261
Nonresidential building.....	659	230	615	937	2,068	4,346	4,221
Industrial.....	...	2	164	755	177	1,771	721
Educational.....	389	52	156	59	934	1,728	2,441
Hospital and institutional.....	101	49	54	85	477	353	331
Other.....	169	127	241	38	480	500	731
Military and Naval.....	19	36	385	690	137	1,307	1,291
Highway.....	1,266	847	1,302	398	2,131	3,160	4,521
Sewer and water.....	253	95	338	97	619	883	1,081
Conservation and development.....	115	359	528	130	793	830	591
All other <sup>2</sup> .....	23	16	260	66	298	112	431

<sup>1</sup> Warehouses, office and loft buildings; stores, restaurants and garages. <sup>2</sup> Miscellaneous public service enterprises and all Federal not included elsewhere.



# Number of Nonfarm Houses Built\*

Source: U. S. Bureau of Labor Statistics, National Bureau of Economic Research.

	Houses	Year	Houses
.....	204,000	1944 .....	169,000
.....	475,000	1945 .....	226,000
.....	247,000	1949 .....	1,025,100
.....	509,000	1950 .....	1,396,000
.....	93,000	1952 .....	1,127,000
.....	336,000	1953 .....	1,103,800
.....	515,000	1954 .....	1,220,400
.....	350,000	1955 .....	1,329,000

Data represents new dwelling units started.

# Monthly Average Railroad Carloadings (in thousands of cars)

Source: Association of American Railroads.

Year	Total	Year	Total
1920 .....	3,760	1947 .....	3,708
1925 .....	4,269	1948 .....	3,643
1929 .....	4,402	1949 .....	2,992
1932 .....	2,348	1950 .....	3,242
1939 .....	2,826	1951 .....	3,437
1940 .....	3,030	1952 .....	3,165
1942 .....	3,564	1953 .....	3,192
1943 .....	3,535	1954 .....	2,822
1944 .....	3,617	1955 .....	3,157
1945 .....	3,492	1956*	3,046

\* First 7 months.

# Industrial Production Indexes, by Groups

(1947-49 average = 100)

Source: Board of Governors of the Federal Reserve System.

Industry	1950	1951	1955	1956*	Industry	1950	1951	1955	1956*
able manufactures.....	116	128	155	158	Leather and products.....	101	94	105	107
rrous metals.....	114	129	140†	146†	Paper and allied products.....	118	125	152	159
onferrous metals.....	116	116			Printing and publishing.....	111	113	127	130
abricated metal products.....	115	122	134	133	Chemicals and allied				
achinery.....	114	130	155	165	products.....	121	136	167	176
ansportation equipment.....	120	135	203	197	Petroleum and coal products	110	122	135	142
truments and related					Food and beverage products	103	105	109	111
roducts.....	114	128	149	162	Tobacco manufactures.....	101	107	105	107
one, clay and glass products	118	131	149	160	Total manufactures.....	113	121	141	144
umber and products.....	113	113	127	123	Minerals.....	105	115	122	130
rniture and misc.....	117	116	132	134	Fuels.....	103	114	123	131
urable manufactures.....	111	114	126	129	Metals, stone and earth.....	111	121	120	129
xtile mill products.....	111	107	107	106	Total industrial production...	112	120	139	142
parel and allied products...	108	105	113	111					
ubber products.....	119	119	143	139					

Average of first 5 months, seasonally adjusted, preliminary. † All primary metal manufacturing.

# Electric Energy Output of Utilities\*

(in millions of kilowatt hours)

Source: Federal Power Commission.

Year	Total	Ownership					Source of energy	
		Privately owned	Publicly owned	Municipal	Federal	Co-operatives; power districts; state projects	% Public to total	Fuels as % of total
.....	39,405	37,716	1,689	1,373	58	94	4.3	23,644 60.0
.....	92,180	87,514	4,667	3,498	300	451	5.1	59,533 64.6
.....	81,740	76,668	5,072	3,583	458	654	6.2	48,283 59.1
.....	127,642	115,078	12,564	5,688	5,476	944	9.8	84,078 65.9
.....	217,759	180,247	37,511	9,223	24,485	3,156	17.2	144,127 66.2
.....	370,673	301,845	68,828	17,617	44,120	6,204	18.6	270,922 73.1
.....	442,665	354,272	88,393	21,625	58,064	8,704	20.0	337,431 76.2
.....	471,686	370,970	100,716	23,505	67,804	9,407	21.4	364,618 77.3
.....	547,037	420,869	126,169	25,852	89,064	11,253	23.1	434,063 79.3

Output by industrial establishments was as follows (in millions of kilowatt hours): 1939—33,667; 1943—49,781; —62,685; 1953—71,505; 1954—72,959; 1955—81,972.

## Fuel Production

Source: U. S. Dept. of Interior, U. S. Dept. of Commerce, and American Gas Association.

Year	Coke, in thousands of short tons	Anthracite coal, in thousands of short tons	Bituminous coal, in thousands of short tons	Natural gas, in millions of therms (produced and marketed) <sup>1</sup>	Manufactured gas, in millions of therms <sup>2</sup>	Crude petroleum, in thousands of 42-gal. barrels
1929.....	59,884	73,828	534,989	20,490*	2,070*	1,007,320
1933.....	27,589	49,541	333,631	16,640*	1,820	905,656
1939.....	44,327	51,487	394,855	26,220	1,830	1,264,962
1941.....	65,187	56,368	514,149	29,780	1,990	1,402,228
1945.....	67,308	54,934	577,617	41,960	2,600	1,713,655
1949.....	63,637	42,702	437,868	55,770	2,680	1,841,940
1951.....	79,331	42,670	533,645	76,660	2,435	2,244,529
1952.....	68,232	39,361	465,312	86,140	2,009	2,291,997
1953.....	78,467	30,023	453,000	90,270	1,756	2,359,998
1954.....	64,327	27,118	389,514	93,987	1,494	2,308,110
1955.....	80,820	26,364	470,004	100,405*	1,370	2,484,516

<sup>1</sup> Includes all natural gas in sales of natural gas mixed with manufactured gas. <sup>2</sup> Includes all manufactured gas products produced and purchased by gas utilities. \* Estimated. † Preliminary.

## Metals Production (in short tons)

Source: American Iron & Steel Institute, Iron Age, American Zinc Institute, American Bureau of Metal Statistics and U. S. Bureau of Mines.

Year	Pig iron and ferroalloys	Steel ingots and castings	Rolled iron and steel products			Copper (smelter output from domestic ore)	Zinc (slab smelter output, all grades)*	Refined lead (domestic and monial exclude)
			Total	Plates and sheets	Aluminum (primary)			
1929.....	47,727,661	63,205,490	45,997,746	13,928,670	113,986	1,001,432	631,601	672,400
1932.....	9,835,227	15,322,901	11,705,219	3,956,505	52,444	272,005	213,531	255,300
1939.....	35,677,097	52,798,714	39,067,553	13,931,919	163,545	712,675	538,198	420,900
1941.....	56,686,604	82,839,259	62,324,187	20,293,071	309,067	966,072	863,955	470,500
1943.....	62,769,947	88,836,512	63,292,673	22,543,040	920,179	1,092,939	971,873	406,500
1945.....	54,919,029	79,701,648	59,811,669	19,314,316	495,060	722,894	799,520	356,500
1948.....	61,911,559	88,640,470	69,191,952	25,694,480	623,456	834,813	850,105	339,400
1949.....	54,916,785	77,978,176	60,882,387	23,470,886	603,462	752,750	870,113	404,400
1951.....	72,448,543	105,199,848	81,911,320	31,869,683	836,881	928,330	931,833	342,600
1952.....	63,353,955	93,168,039	71,348,528	27,251,852	937,331	925,359	961,430	383,300
1953.....	77,250,168	111,609,719	85,943,724	35,699,732	1,252,013	926,448	971,191	328,000
1954.....	59,806,242	88,311,652	68,464,640	28,406,447	1,460,565	835,472	868,242	322,200
1955.....	79,263,865	117,036,085	90,657,553	39,708,255	1,565,721	992,600†	1,031,018	320,000

\* From 1940 includes both foreign and domestic ores. † Preliminary.

## Business Population (in thousands of concerns)

Source: U. S. Department of Commerce, Dun & Bradstreet.

Item	1929	1933	1941	1943	1946	1947	1949	1951	1953	1954
Total operating businesses <sup>1</sup> .....	3,029.0	2,782.1	3,269.6	2,905.1	3,487.2	3,783.2	4,000.0	4,108.5	4,205.7	4,230.0
Manufacturing.....	257.0	166.8	236.6	244.9	285.9	312.0	320.5	327.2	326.6	326.6
Wholesale trade.....	148.1	141.8	194.4	172.6	229.2	250.9	261.8	273.1	285.0	285.0
Retail trade.....	1,327.0	1,291.2	1,558.3	1,329.1	1,555.4	1,685.9	1,794.3	1,834.0	1,859.2	1,859.2
Service industries.....	590.9	574.9	614.4	553.6	656.5	711.5	736.8	735.5	741.9	741.9
Contract construction.....	233.8	185.4	186.4	157.2	243.8	292.6	347.5	388.6	432.3	432.3
All other <sup>2</sup> .....	472.0	422.1	479.5	447.7	520.3	530.3	539.1	543.0	560.6	560.6
New entrants <sup>3</sup> .....	( <sup>3</sup> )	( <sup>3</sup> )	290.0	146.0	617.4	460.8	331.1	363.2	340.5	340.5
Discontinued businesses <sup>2</sup> .....	( <sup>3</sup> )	( <sup>3</sup> )	270.7	337.0	208.7	239.2	306.5	309.3	334.0	334.0
Commercial & industrial failures <sup>4</sup>	22.9	19.9	11.8	3.2	1.1	3.5	9.2	8.1	8.9	8.9

<sup>1</sup> 1929-51, annual average; 1953-54, as of June 30. <sup>2</sup> Annual totals. <sup>3</sup> Not available. <sup>4</sup> Closures resulting from known loss to creditors. <sup>5</sup> Based on incomplete data. <sup>6</sup> Includes transportation, communications, public utility finance, insurance, real estate, and mining and quarrying.

## Consumer Durable Goods Output

Source: *Electrical Merchandising*; *MART Magazine*. Caldwell-Clements, Inc., Radio-Electronics-Television Manufacturers Association; Automobile Manufacturers Association.

Year	Electric clothes washers		Electric ranges		Electric vacuum cleaners		Electric refrigerators		Radio sets		Television sets		Passenger cars	
	Number sold, in thou-	Average retail price	Number sold, in thou-	Average retail price	Number sold, in thou-	Average retail price	Number sold, in thou-	Average retail price	Number sold, in thou-	Average retail price	Number sold, in thou-	Average retail price	Factory sales, in thou-	Average factory age price
1909	3 <sup>1</sup>	\$ 75 <sup>1</sup>	...	...	...	...	...	...	...	...	...	...	4	\$1,229
1910	600	120	40	...	1,024	\$50	5 <sup>4</sup>	\$550 <sup>4</sup>	100 <sup>5</sup>	\$50 <sup>5</sup>	...	...	181	1,190
1911	736	141	85	\$176	1,056	62	75	425	2,000	83	...	...	1,906	949
1912	956	113	173	165	1,253	50	778	292	4,428	136	...	...	3,735	658
1913	570	59	60	150	447	40	798	195	3,000	47	...	...	4,587	621
1914	1,465	72	405	134	1,210	56	2,310	171	8,065	56	...	...	1,135	545
1915	1,892	79	728	142	1,670	56	3,500	155	13,000	35	...	...	3,916	573
1916	251 <sup>2</sup>	...	74	...	258 <sup>3</sup>	...	264	...	500	40	...	...	3,780	679
1917	2,047	121	577	186	2,290	68	2,100	207	14,031	50	7	\$323	70	818
1918	4,196	173	1,600	235	3,361	77	4,766	260	12,260	52	975	393	2,149	921
1919	3,065	171	1,056	230	2,890	77	4,450	255	7,805	42	3,000	323	3,909	1,220
1920	4,273	184	1,830	233	3,529	79	6,200	258	9,849	44	7,464	300	5,119	...
1921	3,267	217	1,400	245	2,842	92	4,075	275	7,692	34	5,385	308	6,666	...
1922	3,610	231	1,350	262	2,658	98	3,600	304	6,276	30	7,347	230	4,321	...
1923	4,387	235	1,600	263	3,330	88	4,025	315	7,800	32	7,905	231	5,559	...
1924	...	...	...	...	...	...	...	...	...	...	...	...	7,920	...

1909. <sup>2</sup> Includes gas engine washers. <sup>3</sup> Includes hand cleaners. <sup>4</sup> 1921. <sup>5</sup> 1922.

## Wood Pulp, Paper and Lumber

Source: U. S. Bureau of the Census and National Lumber Manufacturers Assn.

Year	Wood pulp (in thousands of short tons)	Paper and paperboard (in thousands of short tons)	Lumber (in millions of board feet)
1909	3,518	6,098	34,552
1910	4,863	11,140	36,886
1911	6,993	13,510	25,148
1912	10,011	17,934	33,613
1913	9,060	17,036	34,289
1914	10,167	17,371	28,122
1915	11,946	21,114	35,404
1916	12,872	21,897	36,762
1917	12,207	20,315	32,901
1918	14,849	24,375	38,902
1919	16,524	26,047	37,515
1920	16,473	24,418	37,462
1921	17,537	26,540	36,742
1922	18,341	26,657	37,329†
1923	20,829	29,892	39,108†

Coverage for paper and paperboard increased in 1941. Subject to revision. † Preliminary.

## Expenditures for New Plant and Equipment\*

(in millions of dollars)

Source: Securities and Exchange Commission and U. S. Department of Commerce.

Year	Manufacturing and mining	Transportation	All other†	Total
1939	2,269	645	2,598	5,512
1945	4,366	1,122	3,204	8,692
1946	7,217	1,506	6,125	14,848
1947	9,394	2,187	9,031	20,612
1948	10,016	2,604	9,439	22,059
1949	7,941	2,239	9,105	19,285
1950	8,198	2,323	10,084	20,605
1952	12,617	2,896	10,980	26,493
1954	12,013	2,366	12,448	26,827
1955	12,396	2,525	13,780	28,701
1956†	11,879	2,311	11,673	25,833

\* Data exclude agriculture. † Includes electric and gas utilities, trade, service, communications, construction and finance. ‡ First 3 quarters, estimated.

## Industrial Production Indexes for Western Europe

Source: United Nations.  
(1953 = 100)

Country	1948	1950	1954	1955	Country	1948	1950	1954	1955
Italy	54	86	114	133	Italy	62	79	109	118
Belgium	88	90	108	116	Luxembourg	91	92	105	116
France	82	98	106	111	Netherlands	71	88	110	118
Germany	81	88	109	121	Norway	70	87	106	113
Denmark (Fed. Rep.)	40	72	112	129	Sweden	90	97	104	111
Spain	52	78	122	130	United Kingdom	83	94	107	113
Portugal	70	91	102	105					



## Employment and Unemployment (in millions of persons)

Sources: U. S. Bureau of Labor Statistics, U. S. Bureau of the Census, and U. S. Bureau of Agricultural Economics

Activity	1929	1932	1941	1943	1945	1950	1953	1955	1957
Total employment.....	46.7	37.9	50.4	54.5	52.8	60.0	61.9	63.2	64.0
Non-agricultural employment.....	36.8	26.3	41.3	45.4	44.2	52.5	55.4	50.0	51.0
Manufacturing.....	10.5	6.8	13.0	17.4	15.2	14.9	17.3	16.6	16.0
Durable goods.....	...	...	...	6.5	6.3	8.0	10.1	9.5	9.0
Nondurable goods.....	...	...	...	10.9	8.9	6.9	7.2	7.0	7.0
Mining.....	1.1	0.7	.9	.9	.8	.9	.8	0.8	0.8
Construction.....	1.5	1.0	1.8	1.6	1.1	2.3	2.6	2.8	2.8
Transportation and public utilities.....	3.9	2.8	3.2	3.6	3.9	4.0	4.2	4.1	4.1
Trade.....	6.4	4.9	7.6	7.3	7.7	9.5	10.5	10.8	10.8
Retail.....	...	...	...	5.7	5.9	7.0	7.7	7.9	7.9
Wholesale.....	...	...	...	1.6	1.8	2.5	2.8	2.9	2.9
Finance.....	1.4	1.3	1.5	1.4	1.4	1.8	2.0	2.2	2.2
Service.....	3.1	2.7	3.6	3.8	3.9	4.8	5.5	5.9	5.9
Government.....	3.1	3.2	4.6	6.0	6.0	5.9	6.6	6.9	6.9
Other, self-employed, domestic.....	6.9	5.1	5.1	3.4	4.2	8.4	5.9	(*)	(*)
Agricultural employment.....	9.9	9.6	9.1	9.1	8.6	7.5	6.5	6.7	6.7
Unemployment.....	2.0	12.7	5.5	1.1	1.1	3.1	1.5	2.7	2.7
Public works.....	...	...	1.9	(*)	...	...	...	...	...
Total civilian labor force.....	48.7	50.6	55.9	55.5	53.9	63.1	63.4	65.8	64.0
Armed forces.....	.3	.3	1.5	8.9	11.3	1.5	(*)	(*)	(*)
Total labor force.....	49.0	50.9	57.4	64.4	65.2	64.6	67.0	68.9	64.0

\* Average of first 5 months not adjusted for seasonal variation. \* Negligible. \* Data not available. \* Includes services, transportation and public utilities and retail trade.

## Average Earnings and Hours Worked Per Week in Manufacturing Industries

Source: U. S. Department of Labor.

Industry	1947		1949		1951		1953		1955		1957 <sup>1</sup>	
	Earn- ings	Hours worked	Earn- ings	Hours worked	Earn- ings	Hours worked	Earn- ings	Hours worked	Earn- ings	Hours worked	Earn- ings	Hours worked
All manufacturing <sup>1</sup> .....	\$54.14	40.1	\$54.92	39.2	\$64.71	40.7	\$71.69	40.5	\$76.52	40.7	\$78.62	40.7
Durable goods.....	57.11	40.5	58.03	39.5	69.47	41.6	77.23	41.3	83.21	41.4	84.66	41.4
Primary metal industries.....	61.03	40.1	60.78	38.3	75.12	41.5	84.25	40.9	92.29	41.2	96.02	41.2
Iron and steel foundries.....	58.45	40.7	55.09	37.2	71.66	42.4	76.33	40.6	84.64	41.9	86.46	41.9
Nonferrous foundries.....	59.96	40.0	60.92	39.0	73.74	41.9	80.97	41.1	85.89	40.9	86.89	40.9
Fabricated metal products.....	56.68	40.6	57.82	39.6	68.81	41.7	77.15	41.7	82.37	41.6	83.28	41.6
Hand tools.....	56.07	40.9	54.54	38.6	69.70	42.5	74.70	41.5	77.95	40.6	81.64	40.6
Hardware.....	54.26	40.4	56.28	39.3	66.49	41.3	75.89	41.7	82.78	41.6	79.75	41.6
Structural metal products.....	58.17	41.2	59.90	40.5	71.49	42.3	80.75	42.5	83.01	41.3	85.90	41.3
Electrical machinery.....	55.66	40.1	56.96	39.5	64.84	41.3	71.81	40.8	76.52	40.7	79.20	40.7
Machinery, except electrical.....	60.52	41.2	60.44	39.5	76.38	43.4	82.91	42.3	87.36	41.8	92.44	41.8
Transportation equipment.....	61.58	39.0	64.95	39.2	75.67	40.9	85.28	41.2	93.44	41.9	90.79	41.9
Automobiles.....	61.86	38.4	65.97	38.9	75.45	39.5	87.95	41.1	97.78	42.7	89.58	42.7
Lumber and wood products.....	51.38	41.5	51.72	40.6	59.98	40.8	65.93	40.7	69.29	41.0	67.68	41.0
Furniture & fixtures.....	48.99	41.1	49.48	40.1	57.27	41.2	63.14	41.0	67.23	41.5	67.63	41.5
Stone, clay and glass.....	53.46	40.9	54.45	39.8	63.91	41.5	70.35	40.9	76.78	41.5	78.41	41.5
Nondurable goods.....	50.61	39.6	51.41	38.8	58.46	39.5	63.60	39.5	68.06	39.8	70.03	39.8
Textile—mill products.....	45.59	39.2	44.83	37.7	51.60	38.8	53.57	39.1	55.74	40.1	57.03	40.1
Cotton, silk, synthetic fibers.....	44.36	39.4	42.89	37.2	50.70	39.3	51.09	39.3	52.79	40.3	54.81	40.3
Woolen and worsted goods.....	52.45	40.1	51.19	38.9	57.87	39.1	61.93	39.7	63.38	41.7	64.53	41.7
Apparel and other finished textiles.....	42.79	36.2	41.89	35.8	46.31	35.9	48.41	36.4	49.41	36.6	51.50	36.6
Leather.....	41.66	37.2	41.61	36.6	46.86	36.9	51.65	37.7	53.44	37.9	56.51	37.9
Food.....	51.87	42.0	53.58	41.5	59.92	41.9	66.33	41.2	72.10	41.2	75.08	41.2
Tobacco.....	36.50	38.1	37.25	37.1	43.51	38.5	47.37	38.2	51.60	38.8	53.93	38.8
Paper.....	55.25	42.8	55.96	41.7	65.51	43.1	72.67	43.0	78.87	43.1	80.82	43.1
Printing and publishing.....	66.73	39.3	70.28	38.7	77.21	38.8	85.58	38.9	91.42	38.9	92.38	38.9
Chemicals.....	56.23	41.5	58.63	41.0	67.81	41.6	75.58	41.3	82.39	41.4	84.87	41.4
Petroleum and coal.....	69.23	40.7	72.36	40.4	80.98	40.9	90.17	40.8	96.76	41.0	102.03	41.0
Rubber.....	56.78	39.0	57.79	38.3	68.61	40.6	77.78	40.3	87.57	41.7	86.22	41.7

<sup>1</sup> Average weekly earnings in 1919 = \$23.29, 1929 = \$26.40, 1932 = \$17.86, 1939 = \$24.23. Average hours worked per week in 1914 = 51.0, 1919 = 47.8, 1929 = 45.7, 1932 = 38.2, 1939 = 37.7. \* Average of first four months

# Average Earnings and Hours Worked Per Week in Nonmanufacturing Industries

Source: U. S. Department of Labor.

Industry	1947		1949		1951		1954		1955*	
	Earn-ings	Hours worked	Earn-ings	Hours worked	Earn-ings	Hours worked	Earn-ings	Hours worked	Earn-ings	Hours worked
anthracite mining.....	\$62.77	37.7	\$56.78	30.2	\$66.66	30.3	\$75.60	30.0	\$81.65	32.2
bituminous coal mining.....	66.59	40.7	63.28	32.6	77.79	35.2	80.85	32.6	92.91	37.3
metalliferous mining.....	54.63	41.8	61.55	40.9	74.56	43.6	84.46	40.8	88.36	41.9
quarrying and nonmetallic mining.....	50.54	45.0	56.38	43.3	67.05	45.0	77.44	44.0	76.35	43.0
telephone.....	44.77	37.4	51.78	38.5	58.26	39.1	68.46	38.9	70.63	39.1
telegraph.....	53.56	44.6	62.85	44.7	68.24	44.6	76.13	41.6	77.34	41.5
gas and electric utilities.....	56.69	41.9	63.99	41.5	72.49	41.9	83.01	41.3	84.30	40.9
street railways and busses.....	57.14	46.8	64.61	44.9	72.23	46.3	78.19	43.2	79.57	42.9
retail trade.....	51.99	41.0	57.55	40.7	64.31	40.7	73.93	40.4	75.56	40.4
wholesale trade.....	40.66	40.3	45.93	40.4	50.65	40.2	56.84	39.2	57.52	38.8
hotels (year-round).....	29.36	45.2	32.84	44.2	35.42	43.2	40.13	41.8	40.81	41.8
laundries.....	32.71	42.6	34.98	41.5	37.81	41.1	40.10	40.1	40.67	40.1
laundry and cleaning.....	38.30	41.9	40.71	41.2	43.99	41.5	47.12	39.6	46.50	39.1
private building construction.....	63.13	37.6	70.95	36.7	81.47	37.2	94.12	36.2	93.13	35.3

\* First 4 months average.

## State and Local Government Employment and Payroll: Oct. 1955

Source: U. S. Department of Commerce.

Function	Employees (in thousands)	Payroll (in millions)	Function	Employees (in thousands)	Payroll (in millions)
Natural resources.....	5,054	\$1,418.8	Natural resources.....	126	32.2
Education, total.....	2,169	661.7	Sanitation.....	120	34.1
Public schools.....	1,815	573.2	Local parks and recreation.....	69	17.2
Institutions of higher learning.....	330	81.8	Housing and community rede- velopment.....	25	7.9
Other.....	23	6.7	Employment security.....	45	14.3
Highways.....	475	125.0	State liquor stores.....	14	3.8
Public welfare.....	105	27.5	Local utilities, total.....	228	76.4
Health.....	73	20.3	General control.....	420	92.1
Hospitals.....	446	102.3	All other.....	279	72.0
Police.....	273	84.4			
Local fire protection.....	180	43.7			

## Why Strikes?

Major issues	Percentage of total strikes			
	1948	1949	1950	1955
Wages and hours.....	50.8	46.6	52.8	49.9
Union organization, wages and hours.....	9.4	6.0	5.6	12.5
Union organization.....	13.4	15.7	13.4	8.9
Recognition.....	9.2	10.8	9.9	1.2
Strengthening bargaining po- sition.....	.4	.5	.5	1.6
Closed or union shop.....	1.8	2.2	1.8	.3
Discrimination.....	1.3	1.8	.8	.5
Other.....	.7	.4	.4	5.3
Other working conditions.....	21.5	25.0	22.0	22.3
Job security.....	10.0	12.6	12.2	10.5
Shop conditions and policies.....	9.7	9.7	7.8	10.1
Work load.....	1.3	2.1	1.5	1.2
Other.....	.5	.6	.5	.5
Union or intraunion matters	3.8	5.8	5.3	6.9
Sympathy.....	1.3	1.4	1.0	1.6
Union rivalry or factionalism.....	1.4	1.5	1.6	1.3
Jurisdiction.....	1.0	2.6	2.5	4.0
Other.....	.1	.3	.1	.1
Not reported.....	1.1	.9	.9	1.4
All issues.....	100.0	100.0	100.0	100.0

## Strikes and Lockouts

Source: U. S. Bureau of Labor Statistics.

Year	Strikes and lockouts Number	Workers involved Number (thousands)	Man-days idle Number (thousands)
	Number	(thousands)	(thousands)
1885.....	695	258	n.a.
1890.....	1,897	373	n.a.
1895.....	1,255	407	n.a.
1900.....	1,839	568	n.a.
1905.....	2,186	302	n.a.
1915.....	1,593	n.a.	n.a.
1917.....	4,450	1,227	n.a.
1920.....	3,411	1,463	n.a.
1925.....	1,301	428	n.a.
1929.....	921	289	5,352
1930.....	637	183	3,317
1932.....	841	324	10,502
1933.....	1,695	1,168	16,872
1935.....	2,014	1,117	15,456
1939.....	2,613	1,171	17,812
1943.....	3,752	1,981	13,501
1945.....	4,750	3,470	38,025
1948.....	3,419	1,960	34,100
1949.....	3,606	3,030	50,500
1952.....	5,117	3,540	59,100
1954.....	3,468	1,530	22,600
1955.....	4,050	2,760	27,420

n.a. = not available.

## Membership of Leading American Labor Unions, 1954

Source: Bureau of Labor Statistics, *Directory of Labor Unions in the United States, 1955*.

Name of Union	Affiliation	No. of Members
Amalgamated Clothing Workers.....	AFL-CIO	385,000
Amalgamated Meat Cutters and Butcher Workmen <sup>1</sup> .....	AFL-CIO	335,167
American Federation of Musicians.....	AFL-CIO	248,078
Brotherhood of Locomotive Firemen and Enginemen.....	Ind.	95,000
Brotherhood of Maintenance of Way Employees.....	AFL-CIO	219,191
Brotherhood of Painters, Decorators and Paperhangers.....	AFL-CIO	220,000
Brotherhood of Railroad Trainmen.....	Ind.	204,397
Brotherhood of Railway and Steamship Clerks.....	AFL-CIO	346,443
Building Service Employees' International Union.....	AFL-CIO	206,692
Communications Workers of America.....	AFL-CIO	300,000
Hotel & Restaurant Employees' International Alliance.....	AFL-CIO	412,946
International Association of Machinists.....	AFL-CIO	864,095
International Brotherhood of Boilermakers.....	AFL-CIO	150,000
International Brotherhood of Electrical Workers.....	AFL-CIO	630,000
International Brotherhood of Pulp, Sulphite and Papermill Workers.....	AFL-CIO	149,942
International Brotherhood of Teamsters.....	AFL-CIO	1,231,000
International Hod Carriers', Building and Common Laborers' Union.....	AFL-CIO	433,125
International Ladies' Garment Workers' Union.....	AFL-CIO	440,650
International Union of Mine, Mill and Smelter Workers.....	Ind.	100,000
International Union of Electrical, Radio & Machine Workers.....	AFL-CIO	361,639
International Union of Operating Engineers.....	AFL-CIO	200,000
Oilworkers' International Union <sup>2</sup> .....	AFL-CIO	180,000
Retail Clerks.....	AFL-CIO	265,000
United Association of Plumbers and Steam Fitters.....	AFL-CIO	240,720
United Automobile, Aircraft & Agricultural Implement Workers.....	AFL-CIO	1,239,000
United Brotherhood of Carpenters and Joiners.....	AFL-CIO	804,343
United Electrical, Radio and Machine Workers.....	Ind.	150,000 <sup>2</sup>
United Mine Workers.....	Ind.	800,000 <sup>2</sup>
United Rubber, Cork, Linoleum and Plastic Workers.....	AFL-CIO	175,000
United Steelworkers.....	AFL-CIO	1,194,000

<sup>1</sup> Membership early in 1955 after the International Fur and Leather Workers' Union merged with the Meat Cutters and Butcher Workmen. <sup>2</sup> Formed in March 1955 by merger of the Oil Workers International Union (CIO) and the United Gas, Coke and Chemical Workers of America (CIO). Number of members applies to March 1955.

## Wholesale and Retail Trade: No. of Establishments, 1939 and 1948

Source: Bureau of Census, Department of Commerce.

Kind of business group	No. of establishments		Kind of business group	No. of establishments	
	1939	1948		1939	1948
Retail trade, total.....	1,770,355	1,771,317	Drugs, chemicals, allied products.....	3,298	4,618
Food group.....	560,549	504,902	Tobacco and products (except leaf).....	2,717	3,000
Eating and drinking places.....	305,386	346,677	Dry goods, apparel.....	8,275	11,700
General stores.....	39,688	21,566	Furniture, home furnishings.....	2,214	3,800
General merchandise group.....	50,267	52,741	Paper and its products.....	2,898	4,000
Apparel group.....	106,959	115,707	Farm products—raw materials.....	2,086	2,500
Furniture, furnishings, appliance group.....	52,827	85,680	Automotive.....	7,818	14,600
Automotive group.....	60,132	86,194	Electrical goods.....	3,072	5,400
Gasoline service stations.....	241,858	188,301	Hardware, plumbing, heating.....	3,568	5,900
Lumber, building, hardware group.....	79,313	99,043	Lumber, construction materials.....	3,303	5,800
Drug and proprietary stores.....	57,903	55,903	Machinery equipment & supplies.....	11,270	21,400
Liquor.....	19,136	33,460	Metals, metalwork (except scrap).....	1,017	1,800
Secondhand stores.....	23,962	16,969	Waste materials.....	6,059	7,700
Other retail stores.....	172,375	164,174	Other merchant wholesalers.....	10,508	15,600
Wholesale trade, total.....	199,726	243,366	Manufacturers' sales branches, offices.....	17,926	23,700
Merchant wholesalers, total.....	100,961	146,518	Petroleum bulk stations, terminals.....	30,825	29,400
Groceries, confectionery, meats.....	15,681	17,345	Agents, brokers.....	21,083	24,300
Farm products.....	10,945	13,539	Assemblers (mainly farm products).....	28,931	19,200
Beer, wines, distilled spirits.....	6,232	7,195			



# Retail Sales by Kind of Business Group

(In millions of dollars)

Source: U. S. Bureau of the Census.

Kind of business	1952		1953		1955	
	Amount	%	Amount	%	Amount	%
Durable-goods stores <sup>1</sup> .....	\$ 55,270	33.7	\$ 60,270	35.7	\$ 66,978	36.0
Automotive group.....	28,337	17.3	33,319	19.5	38,227	20.6
Motor-vehicle, other automotive dealers.....	26,383	16.1	31,499	18.4	36,266	19.6
Tire, battery, accessory dealers.....	1,944	1.2	1,820	1.1	1,957	1.0
Furniture and appliance group.....	8,926	5.4	9,125	5.3	10,054	5.4
Furniture, home furnishings stores.....	5,255	3.2	5,135	3.0	6,115	3.3
Household appliance, radio stores.....	3,671	2.2	3,990	2.3	3,940	2.1
Lumber, building, hardware group.....	10,200	6.2	10,421	6.1	11,029	5.9
Lumber, building-materials dealers.....	7,572	4.6	7,713	4.5	8,243	4.4
Hardware stores.....	2,628	1.6	2,708	1.6	2,788	1.5
Non-durable goods stores <sup>1</sup> .....	108,815	66.3	110,369	64.6	118,702	64.0
Apparel group.....	10,633	6.5	10,255	6.0	10,789	5.8
Men's and boys' wear stores.....	2,497	1.5	2,249	1.3	2,293	1.2
Women's apparel, accessory stores.....	4,233	2.6	4,089	2.4	4,208	2.3
Family and other apparel stores.....	2,210	1.3	2,181	1.3	2,284	1.2
Shoe stores.....	1,693	1.1	1,735	1.0	2,008	1.1
Drug and proprietary stores.....	4,717	2.9	4,789	2.8	5,233	2.8
Eating and drinking places.....	12,688	7.7	13,002	7.6	13,661	7.4
Food group <sup>1</sup> .....	39,771	24.2	40,777	23.9	43,637	23.5
Grocery stores.....	32,238	19.6	33,623	19.7	36,919	19.9
Gasoline service.....	9,976	6.1	10,536	6.2	12,412	6.7
General-merchandise group.....	18,694	11.4	19,005	11.1	20,099	10.8
Department stores, excluding mail order.....	10,277	6.3	10,370	6.0	10,882	5.9
Mail order (catalog sales).....	1,339	.8	1,327	.8	1,332	0.7
Variety stores.....	2,996	1.8	3,094	1.8	3,297	1.8
Other general merchandise stores.....	4,082	2.5	4,215	2.5	4,592	2.5
Liquor stores.....	3,165	1.9	3,324	1.9	3,546	1.9
All retail sales.....	164,085	100.0	170,742	100.0	185,480	100.0

<sup>1</sup> Sales of other durable-goods stores, other food stores and other non-durable goods stores not reported separately but included in totals.

## Wholesale Price Indexes by Major Commodity Groups

(1947-49 = 100)

Source: U. S. Bureau of Labor Statistics.

Commodity	1948	1949	1951	1954	1955	1956*
All commodities.....	104.4	99.2	114.8	110.3	110.7	113.3
Farm products.....	107.3	92.8	113.4	95.7	89.6	88.1
Processed foods.....	106.1	95.7	111.4	104.8	101.7	100.5
Textile products & apparel.....	104.4	95.5	110.6	95.2	95.3	95.3
Clothes, skins & leather products.....	102.1	96.9	120.3	94.2	93.8	98.9
Electrical, power & lighting materials.....	107.1	101.9	106.7	108.1	107.9	110.8
Chemicals & allied products.....	103.8	94.8	110.0	107.0	106.6	106.8
Rubber & products.....	102.1	98.9	148.0	126.9	143.8	145.2
Lumber & wood products.....	107.2	99.2	123.9	118.0	123.6	127.3
Printing, paper & allied products.....	102.9	98.5	119.6	116.3	119.3	126.7
Metals & metal products.....	103.9	104.8	122.8	128.0	136.6	146.0
Machinery & motive products.....	100.9	106.6	119.0	124.5	128.4	135.4
Furniture & other household durables.....	101.4	103.1	114.1	115.4	115.9	118.1
Nonmetallic minerals—structural.....	101.7	104.4	113.6	120.8	124.2	128.3
Tobacco mfs. & bottled beverages.....	100.4	101.6	108.1	120.6	121.6	121.7
Miscellaneous.....	103.1	96.1	104.9	102.6	92.0	91.3

\* Average of first 7 months.

## Sales of Leading Retail Outlets

Source: Moody's Manual of Industrials.

1955 Sales  
(in thousands)

## DEPARTMENT STORES

J. C. Penney Co. ....	\$1,220,085
Allied Stores Corp. ....	581,901
Federated Department Stores .....	537,722
May Department Stores Co. ....	494,366
Macy's .....	376,422
Gimbel Bros., Inc. ....	325,025
Marshall Field & Co. ....	201,257

## VARIETY STORES

F. W. Woolworth Co. ....	767,779
S. S. Kresge Co. ....	354,651
W. T. Grant Co. ....	351,849
G. C. Murphy Co. ....	196,423
J. J. Newberry Co. ....	190,690
S. H. Kress & Co. ....	167,896
McCormick Stores Corp. ....	109,705

## GROCERY STORES

Great Atlantic & Pacific Tea Co. ....	4,139,966
Safeway Stores, Inc. ....	1,932,243
Kroger Co. ....	1,219,474
American Stores Co. ....	624,626
First National Stores, Inc. ....	470,629

## DRUG STORES

Walgreen Co. ....	\$192,500
United-Rexall Drug, Inc. ....	153,000
Sterling Drug Co. ....	166,000
People's Drug Store, Inc. ....	57,000

## SHOE STORES

International Shoe Co. ....	262,000
Endicott Johnson Corp. ....	143,000
Melville Shoe Co. ....	114,000
Edison Bros. Stores, Inc. ....	87,000
A. S. Beck Shoe Corp. ....	68,000
G. R. Kinney Co. ....	51,000

## MAIL-ORDER HOUSES

Sears, Roebuck & Co. ....	3,306,000
Montgomery Ward & Co. ....	969,000
Spiegel, Inc. ....	130,000

## FURNITURE STORES

Barker Bros. Corp. ....	33,000
Reliable Stores Corp. ....	27,000
W. & J. Sloane ....	23,000
Spear & Co. ....	23,000
Sterchi Bros. Stores, Inc. ....	18,000
Sterling, Inc. ....	11,000

## Billion-Dollar Companies

(Assets in millions of dollars as of December 31, 1955)

Source: Business Week.

Company	Assets	Company	Assets
Bell Telephone System .....	\$14,480	Sears, Roebuck & Co. ....	\$1,560
General Motors Corp. ....	7,873	Atchison, Topeka & Santa Fe Ry. ....	1,530
Standard Oil (N. J.) .....	7,164	Union Pacific R. R. ....	1,430
U. S. Steel Corp. ....	3,967	Union Carbide & Carbon .....	1,370
Ford Motor Co. ....	2,585	Chrysler Corp. ....	1,360
E. I. du Pont de Nemours & Co. ..	2,484	Humble Oil Co. ....	1,320
Pennsylvania R. R. ....	2,464	Westinghouse Electric Corp. ....	1,280
Socony Mobil Oil Co. ....	2,362	Shell Oil Co. ....	1,270
Standard Oil Co. (Ind.) .....	2,343	Baltimore & Ohio R. R. ....	1,260
Texas Co. ....	2,185	Commonwealth Edison Co. ....	1,250
Gulf Oil Co. ....	2,161	Sinclair Oil Co. ....	1,250
New York Central R. R. ....	2,033	Phillips Petroleum Co. ....	1,200
Southern Pacific System .....	2,018	Cities Service Co. ....	1,120
Bethlehem Steel Corp. ....	1,999	American Gas & Electric System ..	1,070
Pacific Gas & Electric Co. ....	1,870	Aluminum Co. of America .....	1,070
General Electric Co. ....	1,728	International Harvester .....	1,010
Consolidated Edison Co. (N. Y.) ..	1,573		

\* Estimated.

## Chain Stores vs. Other Stores

(in millions of dollars)

	1952	1953	1955
Chain stores .....	30,098	32,930	33,918
Other retail stores .....	133,987	137,812	151,562
Total sales .....	164,085	170,742	185,480
Chains as per cent of total	18.4	19.2	18.3

## What We Own

Automobiles: 8,000 in 1900; 17,439,701 in 1955; 52,000,000 today.

Electric washers: 3,500,000 in 1926; 38,700,000 today.

Electric ranges: 370,000 in 1926; 12,965,000 today.

Electric refrigerators: 142,000 in 1926; 43,300,000 today.

# Number of Service Establishments and Places of Amusement, 1939 and 1948

Source: U. S. Department of Commerce.

Kind of business	1939	1948	Kind of business	1939	1948
<b>PERSONAL SERVICES:</b>			Electrical repair shops.....	15,644	19,440
Barber shops.....	117,998	91,993	Jewelry, watch, clock repair.....	12,485	12,750
Barber and beauty shops.....	4,199	2,591	Leather goods repair.....	2,168	560
Baths and masseurs.....	1,600	1,305	Locksmiths and gunsmiths.....	2,252	1,518
Beauty parlors.....	83,071	74,497	Musical instrument repair.....	982	789
Cleaning and dyeing plants.....	12,616	25,534	Radio repair.....	10,732	12,558
Costume and dress suit rental.....	417	510	Refrigerator repair.....	1,297	2,531
Dry-cleaning service.....	n.a.	384	Saw, knife and tool sharpening and repair.....	1,451	1,304
Funeral service, crematories.....	18,196	18,675	Sewing machine repair.....	355	488
Fur repair and storage.....	2,180	2,334	Stove repair.....	365	207
Laundry cleaning.....	1,228	1,426	Taxidermists.....	363	211
Laundries, all types.....	22,736	19,182	Tool repair.....	1,451	1,304
Linens supply service.....	718	1,176	Typewriter repair.....	618	638
Photographic studios.....	10,957	14,712	Upholstery, furniture.....	9,685	10,297
Rug cleaning and repairing.....	1,012	1,517	Welding shops.....	4,118	3,536
Shoe repair shops.....	50,115	44,151	<b>OTHER SERVICES:</b>		
Shoe shine parlors.....	7,968	2,962	Hotels.....	27,987	29,650
<b>BUSINESS SERVICES:</b>			Tourist courts and camps.....	13,521	25,919
Advertising agencies.....	1,628	3,279	<b>AMUSEMENT PLACES:</b>		
Auctioneers.....	970	670	Amusement devices.....	1,093	1,604
Blueprinting and photostat.....	500	672	Amusement parks.....	245	368
Coin-operated machine.....	1,554	1,302	Bands, orchestras, entertainers.....	550	2,026
Consumer credit reporting.....	2,576	2,652	Bathing beaches (not municipal)....	344	261
Detective agencies.....	280	603	Bicycle rentals.....	247	147
Disinfecting, exterminating.....	952	1,393	Billiard and pool parlors.....	12,998	9,661
Employment agencies.....	1,424	2,231	Boat and canoe rental.....	1,382	1,587
Interior decorating.....	461	601	Bowling alleys.....	4,646	4,505
Mailing services.....	1,433	1,394	Clubs, baseball.....	276	357
News syndicates.....	n.a.	77	Clubs, football.....	n.a.	21
Outdoor advertising.....	649	798	Dance halls, studios, schools.....	2,191	1,074
Photo finishing laboratories.....	1,201	1,703	Race tracks, automobile.....	36	112
Public stenographers.....	1,329	1,036	Race tracks, dog.....	11	15
Sign painting shops.....	5,391	4,283	Race tracks, horse.....	45	71
Telephone answering service.....	n.a.	367	Riding academies.....	840	739
Window cleaning service.....	823	1,260	Shooting galleries.....	324	181
Window display services.....	215	279	Skating rinks, ice.....	59	42
<b>HAIR SERVICES:</b>			Skating rinks, roller.....	1,134	1,382
Automotive repair services and garages.....	78,881	95,544	Sports and athletic fields.....	188	211
Automobile rentals.....	648	1,011	Sports promoters, commercial operators.....	n.a.	6,518
Automobile storage, parking.....	11,095	8,533	Swimming pools (not municipal)....	668	499
Automotive rewinding shops.....	978	2,023	Theaters, motion pictures.....	15,115	17,689
Bicycle repair shops.....	1,601	1,283	Theaters and theatrical producers...	231	1,426
Blacksmith shops.....	16,797	8,249	NOTE: n.a.—not available		

## Advertising Expenditures by Medium

Source: Printers' Ink.

Medium	1948		1949		1950		1953		1955	
	Amount (million dollars)	% of total	Amount (million dollars)	% of total	Amount (million dollars)	% of total	Amount (million dollars)	% of total	Amount (million dollars)	% of total
Newspapers.....	1,749.6	36.0	1,905.0	36.6	2,063.2	36.3	2,655.1	34.0	3,070.0	34.0
Magazines.....	617.1	12.7	633.8	12.2	667.1	11.7	707.9	9.1	545.0	6.0
Radio.....	512.7	10.5	492.5	9.5	514.9	9.0	663.1	8.5	723.5	8.0
Direct mail.....	689.1	14.2	755.6	14.5	803.2	14.1	1,075.5	13.8	1,270.0	14.1
Business papers.....	250.9	5.2	248.1	4.8	251.1	4.4	398.8	5.1	415.0	4.6
Door-to-door.....	132.1	2.7	131.0	2.5	142.5	2.5	174.7	2.2	192.5	2.1
Yellow papers.....	20.4	.4	20.5	.4	21.2	.4	30.8	0.4	33.5	0.4
Television.....			63.0	1.2	185.0	3.3	688.7	8.8	1,005.0	11.1
Other.....	891.7	18.3	952.7	18.3	1,043.1	18.3	1,408.2	18.1	1,774.5	19.7
Total.....	4,863.6	100.0	5,202.2	100.0	5,691.3	100.0	7,803.2	100.0	9,029.0	100.0



## Financial Condition of U. S. Life Insurance Companies

(in millions of dollars)

Source: *Spectator Yearbook* and  
Institute of Life Insurance.

Year	Assets (admitted) Dec. 31	Total income	Premium income	Payment to policyholders*
1910.....	3,876	781	593	387
1920.....	7,320	1,764	1,381	745
1929.....	17,482	4,337	3,343	1,962
1932.....	20,754	4,653	3,495	3,087
1939.....	29,243	5,453	3,776	2,642
1945.....	44,797	7,674	5,159	2,667
1948.....	55,512	9,751	7,157	3,237
1950.....	64,020	11,337	8,189	3,731
1951.....	68,278	12,012	9,040	3,985
1952.....	73,375	13,076	9,883	4,147
1954.....	84,486	15,280	11,563	4,947
1955.....	90,432	16,544	12,546	5,383

\* Beginning 1943, data include payments to U. S. residents by domestic and foreign companies.

## Life Insurance in Force in U. S.

(in millions of dollars)

Source: *Spectator Yearbook* and  
Institute of Life Insurance.

	Dec. 31	Ordinary	Group	Industrial	Total
1910.....	11,783	.....	.....	3,125	14,908
1915.....	16,650	100	.....	4,279	21,029
1925.....	52,892	4,247	.....	12,318	69,457
1929.....	75,686	8,994	.....	17,349	102,029
1930.....	78,576	9,801	.....	17,963	106,340
1933.....	70,872	8,681	.....	16,630	96,183
1935.....	70,684	10,208	.....	17,471	98,363
1940.....	79,346	14,938	.....	20,866	115,150
1945.....	101,550	22,172	.....	27,675	151,397
1948.....	131,158	37,068	.....	31,253	201,200
1949.....	138,847	40,207	.....	32,087	213,600
1950.....	149,071	47,793	.....	33,415	234,100
1951.....	159,054	54,398	.....	34,870	253,140
1952.....	170,795	62,913	.....	36,448	276,550
1954.....	198,419	86,395	.....	38,664	333,770
1955.....	216,600	101,300	.....	39,682	372,330

\* Includes credit insurance.

## Domestic Passenger Traffic by Major Carriers

(in millions of passenger-miles)

Source: Interstate Commerce Commission; Corps of Engineers, U. S. A.; Civil Aeronautics Board; Assn. of American Railroads.

Year	Steam railroads		Busses		Air carriers		Electric Interurban railways		Inland waterways <sup>1</sup>	
	Passenger- miles	% of total	Passenger- miles	% of total	Passenger- miles	% of total	Passenger- miles	% of total	Passenger- miles	% of total
1939.....	22,713	65.0	9,100	26.0	683	2.0	956	2.7	1,486	4.4
1941.....	29,406	62.7	13,100	27.9	1,385	3.0	1,177	2.5	1,821	3.9
1944.....	95,663	74.2	26,920	20.8	2,178	1.7	2,042	1.6	2,187	1.7
1947.....	45,972	58.5	23,948	30.4	6,110	7.8	771	1.0	1,845	2.3
1949.....	35,133	52.8	22,411	33.7	6,753	10.1	842	1.3	1,402	2.2
1951.....	34,640	50.4	21,499	31.3	10,566	15.4	666	1.0	1,333	1.9
1952.....	34,040	49.3	20,500	29.7	12,528	18.1	650	0.9	1,400	2.1
1953.....	31,679	46.4	19,730	28.9	14,760	21.6	582	0.9	1,487	2.2
1954 <sup>2</sup> .....	29,310	38.4	25,614	33.6	19,568	25.6	157	0.2	1,701	2.3
1955 <sup>3</sup> .....	28,500	36.1	25,400	32.2	23,100	29.3	200	0.3	1,650	2.2

<sup>1</sup> Rivers, canals and Great Lakes. <sup>2</sup> Preliminary. <sup>3</sup> Estimated.

## Domestic Freight Traffic by Major Carriers

(in millions of ton-miles)

Source: Interstate Commerce Commission; Corps of Engineers, U. S. A.; Civil Aeronautics Board; Assn. of American Railroads.

Year	Steam railways <sup>1</sup>		Inland waterways <sup>2</sup>		Motor trucks		Oil pipelines		Air carriers <sup>3</sup>	
	Ton- miles	% of total	Ton- miles	% of total	Ton- miles	% of total	Ton- miles	% of total	Ton- miles	% of total
1939.....	338,125	64.22	88,897	16.88	43,931	8.34	55,602	10.56	12	..
1941.....	480,730	64.68	130,916	17.61	63,258	8.51	68,428	9.20	19	..
1944.....	745,573	70.14	137,005	12.89	47,395	4.46	132,864	12.50	71	..
1947.....	663,442	67.51	135,964	13.84	77,918	7.93	105,161	10.70	158	..
1949.....	533,862	61.17	130,192	14.91	93,653	10.73	114,916	13.16	235	..
1951.....	654,340	59.05	168,143	15.17	133,160	12.02	152,115	13.73	378	..
1952.....	622,300	57.76	154,900	14.37	140,000	12.99	160,000	14.84	420	..
1953.....	613,171	52.55	180,622	15.49	206,808	17.72	165,728	14.30	427	..
1955 <sup>3</sup> .....	630,000	50.02	189,000	15.01	245,000	19.45	195,000	15.48	475	..

<sup>1</sup> Includes express and mail. <sup>2</sup> Rivers, canals and domestic traffic on Great Lakes. <sup>3</sup> Estimated.

## Farm Income—Estimated Receipts from Major Farm Marketings (in millions of dollars)

Source: U. S. Department of Agriculture.

Year	Cotton and cotton-seed	Tobacco	Food grains	Oil-bearing crops	Feed grains and hay	Vegetables	Fruits and nuts	Meat animals	Dairy products	Poultry & eggs
1919.....	2,282	500	1,749	96	1,173	631	597	4,045	1,522	1,106
1929.....	1,511	279	788	85	697	751	582	3,017	1,838	1,187
1932.....	461	115	220	29	247	359	299	1,159	986	562
1939.....	627	271	464	110	485	545	411	2,271	1,346	775
1944.....	1,548	688	1,369	531	1,203	1,510	1,446	5,706	2,938	2,473
1947.....	2,245	1,033	2,768	908	2,328	1,710	1,160	9,340	4,046	2,926
1949.....	2,632	904	2,339	846	2,299	1,641	1,013	8,383	3,778	3,088
1951.....	2,849	1,187	1,896	1,058	1,966	1,670	1,214	11,308	4,290	3,667
1953.....	3,186	1,092	2,460	995	2,228	1,757	1,228	8,852	4,370	3,185
1954.....	2,584	1,162	2,139	1,004	2,340	1,620	1,240	9,107	4,116	3,198
1955.....	2,703	1,161	2,312	912	2,323	1,624	1,272	8,868	4,114	3,013

## Farm Income (in millions of dollars)

Source: U. S. Department of Agriculture.

Year	Est. cash income		Government payments	Total cash income
	Crops	Livestock and livestock products		
1919.....	7,645	6,925	...	14,570
1929.....	5,120	6,179	...	11,299
1931.....	2,532	3,837	...	6,369
1935.....	2,957	4,117	573	7,647
1941.....	4,605	6,470	544	11,619
1945.....	9,419	12,001	742	22,162
1946.....	10,835	13,719	772	25,326
1947.....	13,231	16,523	314	30,068
1949.....	12,586	15,426	185	28,197
1950.....	12,575	16,198	283	29,056
1951.....	13,053	19,569	286	32,908
1952.....	14,627	18,498	292	33,417
1953.....	13,797	17,178	213	31,188
1954.....	13,270	16,684	257	30,211
1955.....	13,427	15,837	229	29,493

## U. S. Farm Index (1910-14 = 100)

Source: U. S. Department of Agriculture.

Year	Prices paid by farmers*	Prices rec'd by farmers†	Parity ratio
1935-39 average .	125	107	86
1945.....	189	206	109
1948.....	259	285	110
1950.....	255	256	100
1951.....	281	302	107
1952.....	286	288	101
1955.....	281	236	84
1956†.....	283	234	83

\* Commodities, interest and taxes and wage rates.  
† All crops and livestock. ‡ Average first 6 months.

## Farm to Retail Price Spreads for Farm Food Products\*

Source: U. S. Department of Agriculture.

Year	Retail cost (dollars)	Net farm value (dollars)	Farmer's share of consumer's dollars (%)
Average:			
1913-19.....	361	170	47
1920-24.....	444	181	41
1925-29.....	439	183	42
1933.....	277	90	32
1937.....	363	151	42
1939.....	318	122	38
1945.....	459	246	54
1949.....	939	435	46
1950.....	924	432	47
1953.....	1,002	452	45
1954.....	993	425	43
1955.....	975	396	41

\* Retail cost of 1935-39 average annual purchases of farm food products by a family of three average consumers; farm value of equivalent quantities sold by producers adjusted for value of by-products.

## Farms—Population and Property

Source: U. S. Bureau of the Census.

Item	1930	1940	1950
farm population (thousands) ..	29,447	29,047	24,335
number of farms (thousands) ..	6,289	6,097	5,382
tenancy as % of total.....	42.2	38.7	26.8
all land in farms (million acres)	986	1,061	1,159
average acreage per farm.....	156.9	174.0	215.3
value of farm property (millions of dollars)* ..	56,973	41,227	101,738

\* Includes land, buildings, livestock, implements and machinery.

# Agricultural Output by States, 1955 Crops

Source: U. S. Department of Agriculture.

State	Wheat (1,000 bu.)	Corn (1,000 bu.)	Cotton lint (500 lb. bales)	Potatoes (1,000 cwt.)	Tobacco (1,000 lbs.)	Cattle* (1,000 head)	Hogs* (1,000 head)
Alabama.....	1,007	68,010	1,059	1,828	654	1,798	1,042
Arizona.....	1,218	1,250	726	1,352	.....	1,022	26
Arkansas.....	1,404	22,488	1,668	1,037	.....	1,587	567
California.....	8,883	16,170	1,210	30,112	.....	3,863	470
Colorado.....	17,257	16,650	.....	9,120	.....	2,075	195
Connecticut.....	.....	1,638	.....	1,122	20,530	177	26
Delaware.....	908	6,120	.....	1,852	.....	68	40
Florida.....	.....	11,840	15	6,245	35,094	1,754	427
Georgia.....	1,600	67,080	700	1,136	149,375	1,562	1,663
Idaho.....	38,165	3,410	.....	33,043	.....	1,457	120
Illinois.....	52,008	523,992	2	271	.....	4,028	6,291
Indiana.....	34,394	276,136	.....	1,391	11,388	2,262	4,349
Iowa.....	3,364	522,200	.....	450	.....	6,223	11,602
Kansas.....	128,385	34,104	.....	278	115	4,298	929
Kentucky.....	4,020	79,253	7	1,412	351,226	1,826	1,203
Louisiana.....	.....	18,531	584	6,146	150	1,923	473
Maine.....	.....	432	.....	35,814	.....	228	24
Maryland.....	4,744	21,020	.....	1,073	35,525	529	225
Massachusetts.....	.....	1,500	.....	1,001	10,740	180	160
Michigan.....	27,966	93,186	.....	5,631	.....	1,924	776
Minnesota.....	12,186	284,935	.....	8,268	240	4,018	3,637
Mississippi.....	286	48,420	2,021	1,655	.....	2,440	808
Missouri.....	48,081	165,204	405	821	3,840	4,027	3,819
Montana.....	109,350	3,999	.....	1,350	.....	2,515	141
Nebraska.....	78,255	107,424	.....	2,810	.....	4,821	2,493
Nevada.....	249	120	.....	352	.....	597	19
New Hampshire.....	.....	528	.....	416	.....	118	13
New Jersey.....	1,556	5,454	.....	5,112	.....	226	244
New Mexico.....	1,770	1,092	250	89	.....	1,212	45
New York.....	10,075	34,105	.....	18,455	.....	2,288	157
North Carolina.....	6,858	70,482	355	5,830	997,395	955	1,276
North Dakota.....	112,942	31,410	.....	7,830	.....	2,131	439
Ohio.....	43,384	220,995	.....	3,380	21,802	2,416	2,836
Oklahoma.....	24,160	8,112	457	458	.....	3,244	463
Oregon.....	21,899	2,562	.....	7,645	.....	1,456	157
Pennsylvania.....	15,964	61,364	.....	8,410	45,725	1,896	642
Rhode Island.....	.....	276	.....	1,002	.....	25	12
South Carolina.....	2,812	29,344	570	1,850	197,200	633	581
South Dakota.....	27,461	87,318	.....	690	.....	3,367	1,494
Tennessee.....	3,417	61,285	620	1,799	129,397	1,753	1,183
Texas.....	14,326	48,288	4,060	3,674	.....	8,586	1,100
Utah.....	6,475	1,840	.....	1,598	.....	779	63
Vermont.....	.....	3,224	.....	465	.....	469	13
Virginia.....	6,630	32,870	11	5,606	162,049	1,396	678
Washington.....	55,832	2,812	.....	9,633	.....	1,218	134
West Virginia.....	851	7,293	.....	1,053	4,000	593	170
Wisconsin.....	1,419	137,000	.....	6,552	19,343	4,384	1,831
Wyoming.....	5,200	1,740	.....	875	.....	1,118	32
Total.....	936,761	3,241,536	14,721	247,992	2,195,788	97,465	55,088

\* Number on farms as of Jan. 1, 1956.

## Domestic Animals on Farms, Number and Value

Source: U. S. Department of Agriculture.

January 1:	Number (thousands)							Value of domestic animals (millions of dollars)
	Horses & Mules	Cattle	Dairy cows	Sheep	Swine	Chickens	Turkeys	
1945.....	11,950	85,573	27,770	46,520	59,373	516,497	7,082	11,707
1947.....	10,129	80,554	25,842	37,489	56,810	467,217	5,879	15,546
1951.....	7,036	82,083	23,722	30,635	62,852	442,657	5,091	22,165
1952.....	6,150	88,072	23,369	32,088	63,582	449,925	5,822	25,201
1953.....	5,403	94,241	24,094	31,861	54,294	429,731	5,305	19,477
1956.....	3,962	97,465	23,318	27,009	55,088	382,218	4,892	13,933



## Regional Economic Differences

Source: U. S. Depts. of Commerce and Labor and *Sales Management*, American Telephone and Telegraph Co. and Edison Electric Institute.

State	1950 % of employed in Agriculture	1950 Manufacturing	Income received per capita, 1955	% increase per capita income received 1929-55	Est. retail sales* (\$ millions, 1955)	% distribution of electric customers, 1955	% households with telephone service, Jan. 1956
New England.....	.....	.....	2,087	...	11,854	6.41	...
Maine.....	9.3	34.2	1,593	165	1,015	.63	63
New Hampshire.....	6.5	40.4	1,732	151	661	.41	71
Vermont.....	18.2	24.6	1,535	145	412	.24	66
Massachusetts.....	1.8	37.4	2,097	130	5,961	3.13	85
Rhode Island.....	1.5	44.0	1,957	125	927	.53	75
Connecticut.....	2.9	42.6	2,499	143	2,877	1.47	95
Middle Atlantic.....	.....	.....	2,149	...	37,722	19.65	...
New York.....	2.9	29.8	2,263	95	19,367	9.69	85
New Jersey.....	2.5	37.7	2,311	148	6,623	3.52	88
Pennsylvania.....	4.1	35.5	1,902	145	11,732	6.43	80
East North Central.....	.....	.....	2,078	...	40,939	20.92	...
Ohio.....	6.9	36.6	2,062	164	10,579	5.54	84
Indiana.....	11.6	34.8	1,894	209	4,966	2.79	74
Illinois.....	7.1	32.0	2,257	136	11,905	5.65	78
Michigan.....	6.7	40.9	2,134	169	9,272	4.55	85
Wisconsin.....	18.6	30.6	1,774	160	4,218	2.39	78
West North Central.....	.....	.....	1,647	...	17,210	9.31	...
Minnesota.....	22.1	16.3	1,691	183	3,719	1.98	83
Iowa.....	28.5	15.2	1,577	173	3,241	1.73	84
Missouri.....	17.5	21.8	1,800	187	4,822	2.61	72
North Dakota.....	44.2	2.9	1,372	266	700	.35	62
South Dakota.....	40.5	4.9	1,245	199	705	.40	66
Nebraska.....	29.6	9.2	1,540	161	1,679	.88	80
Kansas.....	23.0	12.6	1,647	208	2,345	1.36	80
South Atlantic.....	.....	.....	1,502	...	22,791	13.27	...
Delaware.....	8.8	32.4	2,513	147	535	.23	88
Maryland.....	6.1	24.9	1,991	156	2,926	1.53	76
District of Columbia.....	0.2	7.3	2,324	83	1,315	.35	83
Virginia.....	14.6	20.5	1,535	253	3,384	1.93	60
West Virginia.....	9.8	18.9	1,288	179	1,521	1.07	50
North Carolina.....	24.6	27.9	1,236	270	3,550	2.50	46
South Carolina.....	26.1	27.9	1,108	310	1,678	1.20	43
Georgia.....	21.2	23.0	1,333	281	3,306	2.03	52
Florida.....	12.2	10.7	1,654	217	4,577	2.43	63
East South Central.....	.....	.....	1,175	...	9,065	6.46	...
Kentucky.....	25.7	15.8	1,238	217	2,373	1.61	49
Tennessee.....	21.8	21.1	1,256	233	2,955	2.00	57
Alabama.....	24.3	21.8	1,181	265	2,352	1.69	45
Mississippi.....	42.1	12.6	946	232	1,385	1.09	34
West South Central.....	.....	.....	1,483	...	16,311	9.26	...
Arkansas.....	35.0	13.8	1,062	248	1,417	1.04	36
Louisiana.....	17.3	15.1	1,333	221	2,531	1.62	61
Oklahoma.....	20.5	9.8	1,506	232	2,292	1.45	65
Texas.....	16.0	13.5	1,614	238	10,072	5.15	64
Mountain.....	.....	.....	1,663	...	6,944	3.46	...
Montana.....	24.8	8.5	1,844	210	824	.39	68
Idaho.....	26.8	9.2	1,462	191	723	.40	63
Wyoming.....	20.5	6.0	1,753	159	412	.20	67
Colorado.....	15.1	12.2	1,764	177	1,909	.96	80
New Mexico.....	18.4	5.9	1,430	251	792	.40	51
Arizona.....	14.7	8.8	1,577	167	1,101	.51	59
Utah.....	12.4	12.2	1,553	178	811	.45	78
Nevada.....	10.5	5.1	2,434	177	372	.14	67
Pacific.....	.....	.....	2,186	...	22,707	11.35	...
Washington.....	9.3	21.2	1,987	165	3,132	1.72	75
Oregon.....	12.1	22.7	1,834	169	2,057	1.07	69
California.....	7.3	19.6	2,271	128	17,518	8.55	82
Al.....	12.2	25.9	1,847	163	185,544	100.00	73

## Receipts and Expenditures of the National Government (in millions of dollars)

Source: U. S. Treasury Department.

Yearly average or year ended June 30	Receipts				Expenditures							
	Customs (including tonnage tax) <sup>1</sup>	Internal revenue		Other receipts	Total receipts	Net receipts <sup>2</sup>	Department of the Army <sup>3</sup>	Department of the Navy	Interest on public debt	All other	Total expendi- tures <sup>4</sup>	Surplus (+) or deficit (-)
		Income and profits tax	Other									
1789-1800.....	6	.....	.....	7	7	2	.....	3	1	6	.....	
1801-1810.....	12	.....	.....	13	13	2	.....	4	2	9	+4	
1811-1820.....	16	.....	3	21	21	11	5	5	3	24	+3	
1821-1830.....	20	.....	2	22	22	4	3	4	5	16	+6	
1831-1840.....	20	.....	10	30	30	8	5	.....	11	24	+6	
1841-1850.....	24	.....	3	27	27	13	7	.....	11	32	.....	
1851-1860.....	54	.....	6	60	60	16	12	3	29	60	.....	
1861-1865.....	69	17	55	161	161	548	65	35	36	684	-523	
1866-1870.....	179	51	171	447	447	128	28	135	86	377	+70	
1871-1875.....	186	8	113	337	337	40	23	112	112	287	+50	
1876-1880.....	146	.....	117	288	288	37	16	100	102	255	+33	
1881-1885.....	202	.....	132	367	367	43	16	64	135	258	+109	
1886-1890.....	216	.....	127	375	375	40	18	44	177	279	+96	
1891-1895.....	177	.....	150	353	353	50	29	30	255	364	-11	
1896-1900.....	185	.....	207	435	435	111	48	38	260	457	-22	
1901-1905.....	260	.....	255	559	559	133	86	28	288	535	+24	
1906-1910.....	311	4	257	628	628	169	113	23	334	639	-11	
1915.....	210	80	336	698	698	202	142	23	394	761	-63	
1918.....	180	2,314	872	3,665	3,665	4,870	1,279	190	6,358	12,697	-9,032	
1929.....	602	2,331	607	4,033	4,033	426	365	678	1,830	3,299	+734	
1933.....	251	746	888	2,080	2,021	435	349	689	3,150	4,623	-2,602	
1937.....	486	2,163	2,434	5,294	4,979	628	557	866	5,705	7,756	-2,777	
1939.....	319	2,189	2,972	5,668	5,104	695	673	941	6,657	8,966	-3,862	
1943.....	324	16,094	6,050	23,402	22,202	42,526	20,888	1,808	14,400	79,622	-57,420	
1944.....	431	34,655	7,030	43,892	43,892	49,438	26,538	2,609	16,730	95,315	-51,423	
1945.....	355	35,173	8,729	43,933	44,762	50,490	30,047	3,617	14,549	98,703	-53,941	
1946.....	435	30,885	9,426	44,238	40,027	27,987	15,161	4,722	12,833	60,703	-20,676	
1947.....	494	29,395	10,074	44,508	40,043	9,172	5,597	4,958	19,562	39,289	+754	
1949.....	384	29,482	10,825	42,773	38,246	7,862	4,435	5,339	20,730	40,057	-1,811	
1950.....	423	28,263	11,186	41,311	37,045	5,789	4,130	5,750	20,977	40,167	-3,122	
1951.....	624	37,753	13,354	53,369	48,143	8,636	5,863	5,613	13,163	44,633	+3,510	
1952.....	551	51,347	14,288	67,999	62,129	17,453	10,231	5,859	19,790	66,145	-4,017	
1953.....	613	54,073	15,808	72,649	64,825	11,875	11,293	6,503	23,756	74,274	-9,449	
1954.....	562	53,906	16,394	73,173	64,655	13,054	11,293	6,382	20,913	67,772	-3,117	
1955.....	606	49,915	16,374	69,454	60,390	9,448	9,733	6,370	22,613	64,570	-4,180	

<sup>1</sup> Beginning 1932, tonnage tax incl. in "Other receipts." <sup>2</sup> Net receipts equal total receipts less (a) appropriations to federal old-age and survivors' insurance trust fund beginning fiscal year 1937 and (b) refunds of receipts beginning fiscal year 1931. <sup>3</sup> Formerly War Department. <sup>4</sup> Includes Air Force: 1949—\$1,699,460,724; 1950—\$3,520,632,580; 1951—\$6,338,603,828; 1952—\$12,851,619,848; 1953—\$15,085,237,952; 1954—\$15,668,473,393; 1955—\$16,409,630,243.

## Money and Interest Rates

### (Per cent per annum)

Source: Federal Reserve Board.

Year	Open market rate in New York City			Commercial loan rates		
	Prime commercial paper, 4 to 6 months*	Prime bankers' acceptances, 90 days*	Call loans, renewal rate†	New York City	7 other northern & eastern cities	11 southern & western cities
1909	5.85	5.03	7.61	5.76	5.82	5.93
1910	2.73	1.28	2.05	4.20	4.81	5.21
1911	1.73	.63	1.16	3.43	4.46	5.04
1912	.76	.13	.56	1.76	3.39	3.76
1913	.81	.44	1.00	1.69	2.75	3.26
1914	.54	.44	1.00	1.97	2.55	3.19
1915	.75	.44	1.00	1.99	2.51	2.73
1916	1.03	.87	1.38	1.81	2.33	2.76
1917	1.48	1.12	1.63	2.37	2.71	3.10
1918	2.17	1.60	2.17	2.83	3.09	3.52
1919	2.52	1.88	3.06	3.47	3.68	4.04
1920	2.18	1.71	3.20	3.48	3.70	4.03
1921	3.16	2.43	3.80	3.86	4.04	4.18

\* Prevailing rate. † New York Stock Exchange; average of daily quotations. ‡ First six months.

## U. S. Money in Circulation by Denomination<sup>1</sup>

### (in millions of dollars)

Source: U. S. Treasury Department.

Denomination	1939	1940	1943	1945	1950	1951	1952	1953	1955	1956 <sup>2</sup>
100	590	648	1,019	1,274	1,554	1,654	1,750	1,812	1,927	1,957
50	559	610	909	1,039	1,113	1,182	1,228	1,249	1,312	1,258
20	36	39	70	73	64	67	71	72	75	74
10	1,019	1,129	1,973	2,313	2,049	2,120	2,143	2,119	2,151	2,065
5	1,772	2,021	5,194	6,782	5,998	6,329	6,561	6,565	6,617	6,514
1	1,576	1,800	5,705	9,201	8,529	9,177	9,696	9,819	9,940	9,840
50c	460	538	1,481	2,327	2,422	2,544	2,669	2,732	2,736	2,674
20c	919	1,112	2,912	4,220	5,043	5,207	5,447	5,581	5,641	5,500
10c	191	227	407	454	368	355	343	333	307	294
5c	425	523	749	801	588	556	512	486	438	415
1c	20	30	9	7	4	4	4	4	3	3
5c	32	60	22	24	12	12	10	11	12	8
Total	7,598	8,732	20,449	28,515	27,741	29,206	30,433	30,781	31,158	30,604

<sup>1</sup> End of year. <sup>2</sup> Paper currency only; \$1 silver coins reported under coin. <sup>3</sup> End of July. <sup>4</sup> Includes unassorted currency.

## Public Debt of the United States

Source: U. S. Treasury Department.

Year	Gross debt		June 30—	Gross debt	
	Amount (in millions of dollars)	Per capita (dollars)		Amount (in millions of dollars)	Per capita (dollars)
1890	\$ 83	\$ 15.87	1943	\$ 136,696	\$ 999.83
1900	65	2.06	1945	258,682	1,848.60
1910	2,678	75.01	1946	269,422	1,905.42
1920	1,263	16.60	1947	258,286	1,792.05
1930	1,191	11.85	1948	252,292	1,720.71
1940	24,299	228.23	1950	257,357	1,696.75
1950	16,931	139.04	1951	255,222	1,653.42
1960	19,487	156.10	1952	259,105	1,650.12
1970	28,701	225.55	1953	266,071	1,666.81
1980	36,425	282.75	1954	271,260	1,670.23
1990	40,440	308.98	1955	274,374	1,660.38
2000			1956 estimated	274,300	1,638.84

<sup>1</sup> Figures for 1800 are as of Jan. 1.



# Federal Reserve System, All Member Banks, Principal Assets and Liabilities\* (all money figures in millions of dollars)

Source: Federal Reserve Board.

	1925	1930	1935	1940	1945	1951	1955	1956†
Loans.....	21,996	23,670	12,175	15,321	22,775	49,561	70,982	75,500
U. S. Gov't obligations.....	3,728	4,125	12,268	15,823	78,338	51,621	50,697	46,190
Other security investments.....	5,160	6,864	5,541	5,982	6,070	11,065	13,680	13,300
Total deposits†.....	34,250	37,029	38,454	56,430	129,670	141,015	163,757	155,920
Demand deposits.....	19,124	18,796	21,056	33,829	91,820	95,968	108,727	112,090
Time deposits.....	10,557	13,012	10,041	12,178	24,210	30,623	39,165	40,020
Capital accounts.....	4,678	6,593	5,145	5,698	7,589	10,218	12,783	13,250
Number of banks.....	9,489	8,052	6,387	6,486	6,884	6,840	6,543	6,500

\* End of year. † As of June 27. ‡ Includes interbank deposits, domestic and foreign, and U. S. Government and Postal Savings deposits.

## Balance of Payments of the U.S., 1948-54 (in millions of dollars)

Source: Department of Commerce.

Item	1948	1949	1950	1951	1952	1954	1955
Exports of goods and services, total.....	17,058	16,033	14,396	20,282	20,661	20,896	21,848
Military transfers under aid program.....	300	210	526	1,470	2,603	3,132	2,146
Other goods and services.....	16,758	15,823	13,870	18,812	18,058	17,764	19,702
Imports of goods and services.....	10,295	9,661	12,053	15,068	15,688	15,872	17,656
Merchandise, adjusted (excl. military expenditures).....	7,563	6,879	9,108	11,202	10,838	10,304	11,490
Transportation.....	646	700	818	974	1,115	1,001	1,179
Travel.....	600	678	727	722	811	958	1,095
Miscellaneous services.....	407	450	479	545	577	595	621
Military expenditures.....	799	621	576	1,270	1,957	2,595	2,767
Income on investments.....	280	333	345	355	390	419	504
Balance on goods and services.....	6,763	6,372	2,343	5,214	4,973	5,024	4,192
Net foreign payments.....	-4,807	-5,839	-4,544	-4,987	-5,137	-5,290	-4,576
Balance on goods, services and net foreign payments.....	1,956	533	-2,201	227	-164	-266	-384
U. S. capital, net outflow of funds (-), total.....	-1,930	-1,205	-1,421	-1,224	-1,578	-1,528	-1,241
Foreign capital, net outflow of funds (-), total.....	352	72	1,912	578	1,612	1,459	1,463
Gold sales [purchases (-)].....	-1,530	-164	1,743	-53	-379	298	40
Foreign capital and gold, total.....	-1,178	-92	3,655	525	1,233	1,757	1,503
Errors and omissions.....	1,152	764	-33	472	509	37	122

## Loans of the International Bank¹ (in millions of U. S. dollars)

Country	No. of loans	Gross amount	Net amount	Country	No. of loans	Gross amount	Net amount
Africa: Algeria.....	1	10.0	10.0	Europe: Austria.....	4	53.0	53.0
Belgian Congo.....	1	40.0	40.0	Belgium.....	3	66.0	66.0
East Africa.....	1	24.0	24.0	Denmark.....	1	40.0	40.0
Ethiopia.....	3	8.5	8.5	Finland.....	6	65.3	65.1
French West Africa.....	1	7.5	7.5	France.....	1	250.0	250.0
Rhodeasias & Nyasaland.....	3	122.0	122.0	Iceland.....	5	5.9	5.9
Union of South Africa.....	5	135.2	135.2	Italy.....	3	90.0	88.4
Asia: Burma.....	2	19.4	19.4	Luxembourg.....	1	12.0	11.8
Ceylon.....	1	19.1	19.1	Netherlands.....	9	229.0	221.5
India.....	8	214.7	199.9	Norway.....	3	75.0	75.0
Iraq.....	1	12.8	6.3	Turkey.....	6	63.4	61.0
Japan.....	5	53.6	51.8	Yugoslavia.....	3	60.7	60.7
Lebanon.....	1	27.0	27.0	Western Hemisphere¹.....	61	676.9	658.4
Pakistan.....	6	77.3	77.3				
Thailand.....	4	37.4	37.4	Total.....	153	\$2,754.1	\$2,698.5
Australasia: Australia.....	4	258.5	258.5				

¹ Includes Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.

Par Values of Member Currencies<sup>1</sup>

Source: International Monetary Fund.

Member	Currency	U. S. cents		Member	Currency	U. S. cents	
		per currency unit	Currency units per U. S. dollar			per currency unit	Currency units per U. S. dollar
Australia.....	Pound	224.000	0.446 429	Indonesia.....	Rupiah	( <sup>2</sup> )	( <sup>2</sup> )
Austria.....	Schilling	3.846 15	26.000 0	Iran.....	Rial	3.100 78	32.250 0
Belgium.....	Franc	2.000 00	50.000 0	Iraq.....	Dinar	280.000	0.357 143
Bolivia.....	Boliviano	0.526 316	190.000	Israel.....	Pound	( <sup>2</sup> )	( <sup>2</sup> )
Brazil.....	Cruzeiro	5.405 41	18.500 0	Italy.....	Lira	( <sup>2</sup> )	( <sup>2</sup> )
Burma.....	Kyat	21.000 0	4.761 90	Japan.....	Yen	0.277 778	360.000
Canada <sup>2</sup> .....	Dollar	....	....	Jordan.....	Dinar	280.000	0.357 143
Ceylon.....	Rupée	21.000 0	4.761 90	Korea.....	Hwan	( <sup>2</sup> )	( <sup>2</sup> )
Chile.....	Peso	0.909 091	110.000	Lebanon.....	Pound	45.631 3	2.191 48
China.....	Yuan	( <sup>2</sup> )	( <sup>2</sup> )	Luxemburg.....	Franc	2.000 00	50.000 0
Colombia.....	Peso	51.282 5	1.949 98	Mexico.....	Peso	8.000 00	12.500 0
Costa Rica.....	Colón	17.809 4	5.615 00	Netherlands.....	Guilder	26.315 8	3.800 00
Cuba.....	Peso	100.000	1.000 00	Nicaragua.....	Córdoba	14.2857	7.000 00
Denmark.....	Krone	14.477 8	6.907 14	Norway.....	Krone	14.000 0	7.142 86
Dominican Republic.....	Peso	100.000	1.000 00	Pakistan.....	Rupée	21.000 0	4.761 90
Ecuador.....	Sucre	6.666 67	15.000 0	Panamá.....	Balboa	100.000	1.000 00
Egypt.....	Pound	287.156	0.348 242	Paraguay.....	Guaraní	1.666 67	60.000 0
El Salvador.....	Colón	40.000 0	2.500 00	Peru.....	Sol	( <sup>2</sup> )	( <sup>2</sup> )
Ethiopia.....	Dollar	40.250 0	2.484 47	Philippines.....	Peso	50.000 0	2.000 00
Finland.....	Markka	0.434 783	230.000	Sweden.....	Krona	19.330 4	5.173 21
France.....	Franc	( <sup>2</sup> )	( <sup>2</sup> )	Syria.....	Pound	45.631 3	2.191 48
Germany, Federal Re- public of.....	Deutsche Mark	23.809 5	4.200 00	Thailand.....	Baht	( <sup>2</sup> )	( <sup>2</sup> )
Greece.....	Drachma	( <sup>2</sup> )	( <sup>2</sup> )	Turkey.....	Lira	35.714 3	2.800 00
Guatemala.....	Quetzal	100.000	1.000 00	Union of South Africa	Pound	280.000	0.357 143
Haiti.....	Gourde	20.000 0	5.000 00	United Kingdom.....	Pound	280.000	0.357 143
Honduras.....	Lempira	50.000 0	2.000 00	United States.....	Dollar	100.000	1.000 00
Iceland.....	Króna	6.140 36	16.285 7	Uruguay.....	Peso	( <sup>2</sup> )	( <sup>2</sup> )
India.....	Rupée	21.000 0	4.761 90	Venezuela.....	Bolívar	29.850 7	3.350 00
				Yugoslavia.....	Dinar	0.333 333	300.000

<sup>1</sup> As of Mar. 2, 1956. <sup>2</sup> No fixed value. <sup>3</sup> Par value not yet established. <sup>4</sup> In Nov. 1949, Peru introduced a new exchange system, but no agreement on a new par value has been reached.

## Foreign Exchange Rates

(Average of noon buying rates for cable transfers in New York; in U. S. cents per unit of foreign currency.)  
Source: Federal Reserve System.

Year	Canada (dollars)	France (franc)	Germany (Deutsche Mark)	Italy (lira)	Japan (yen)	Mexico (peso)	United Kingdom (pound)
1914.....	100.07*	19.627	23.64	19.249	....	....	492.96
1918.....	98.37	17.805	17.32	12.719	53.06	....	476.505
1929.....	99.247	3.9161	23.809	5.23	46.1	48.18	485.69
1939.....	96.018	2.51	40.06	5.1959	25.96	19.30	443.538
1945 official.....	90.909	1.9711	....	....	....	20.581	403.50
1945 free.....	90.485	....	....	....	....	....	403.02
1950.....	91.474	.2858	23.838	....	....	11.570	280.07†
1955.....	101.401	.2856	23.765	....	....	8.006	279.13
1956†.....	100.484	.2855	23.732	....	....	8.006	280.59

\* Based on quotations for U. S. funds in Canada. Thereafter, on Canadian funds in U. S. (not strictly comparable).  
† The British pound was devalued from 403 to 280 on Sept. 18, 1949. ‡ Average for January through June. NOTE:  
Leaders (....) indicate figures not available.

## U. S. Exports of Leading Commodities

(Value in millions of dollars)

Source: U. S. Department of Commerce.

Commodity	Value	
	1954	1955
Crude materials:.....	1,899	1,902
Cotton, unmanufactured.....	788	477
Coal.....	304	485
Tobacco, unmanufactured.....	304	355
Soybeans.....	133	173
Crude petroleum.....	45	38
Other.....	325	374
Foodstuffs:.....	1,501	1,772
Grains and preparations.....	750	940
Wheat, including flour.....	427	480
Corn.....	131	169
Fruits and vegetables.....	272	286
Meats and edible animal fats.....	149	151
Dairy products and eggs.....	100	135
Other.....	230	260
Manufactures, including semimanufactures:.....	11,578	11,715
Excluding type I and II special category items.....	8,720	9,804
Machinery.....	2,595	2,814
Electrical machinery and apparatus.....	599	639
Generating, welding sets and generating sets.....	65	56
Household refrigerators, freezers and parts.....	74	77
Radio and television apparatus.....	98	108
Industrial machinery, total.....	1,465	1,625
Construction and mining machinery.....	448	535
Engines, turbines and parts.....	147	162
Metalworking and machine tools.....	210	206
Agricultural machinery & implements.....	126	123
Tractors, parts and accessories.....	278	286
Tracklaying tractors, new <sup>1</sup> .....	95	89
Wheel tractors, new.....	80	78
Automobiles, parts and accessories.....	1,036	1,234
Motor trucks and buses, commercial, new.....	333	342
Passenger automobiles, commercial, new.....	301	381
Chemicals and related products.....	983	1,075
Medicinal and pharmaceutical preparations.....	244	227
Chemical specialties.....	326	394
Industrial chemicals.....	149	161
Textile manufactures.....	622	616
Cotton cloth, duck and tire fabric <sup>2</sup> .....	165	147
Broad woven fabrics of synthetic fibers <sup>3</sup> .....	92	93
Iron and steel-mill products including scrap.....	516	815
Petroleum products.....	386	402
Motor fuel and gasoline.....	45	50
Lubricating oils.....	95	95
Metal manufactures.....	341	397
Nonferrous metals and ferroalloys.....	243	291
Paper and manufactures.....	162	195
Rubber manufactures.....	109	160
Other.....	1,727	1,805

## U. S. Imports for Consumption of Leading Commodities

(Value in millions of dollars)

Source: U. S. Department of Commerce.

Commodity	Value	
	1954	1955
Crude materials:.....	2,413	2,850
Crude petroleum.....	544	662
Nonferrous ores and concentrates <sup>1</sup> .....	473	434
Manganese ores.....	77	72
Tungsten ore.....	76	56
Tin ore.....	42	37
Chrome ore.....	34	37
Copper ore and concentrates.....	66	73
Zinc-bearing ores.....	54	40
Lead ore and flue dust.....	48	38
Crude rubber.....	262	441
Wool, unmanufactured.....	223	261
Iron ore.....	119	177
Tobacco, unmanufactured.....	83	85
Oilseeds (mainly copra).....	62	55
Undressed furs.....	67	81
Vegetable fibers, except cotton, unmanufactured.....	58	54
Hides and skins.....	53	57
Other.....	361	400
Foodstuffs:.....	3,317	3,113
Coffee.....	1,486	1,357
Cane sugar.....	410	414
Cocoa or cacao beans.....	252	185
Fruits, edible nuts and vegetables.....	225	246
Meat products.....	180	163
Alcoholic spirits and wines.....	147	162
Grains and preparations.....	93	61
Other.....	314	312
Semimanufactures:.....	2,313	2,774
Nonferrous metals <sup>2</sup> .....	854	1,006
Copper.....	283	349
Tin.....	143	142
Aluminum.....	99	107
Nickel metal and oxide.....	150	180
Lead.....	73	83
Zinc.....	34	47
Gas oil and fuel oil.....	254	320
Wood pulp.....	252	277
Sawmill products.....	252	323
Fertilizer materials.....	90	70
Vegetable oils, expressed, inedible.....	59	53
Iron and steel semimanufactures.....	42	57
Other.....	400	517
Finished manufactures:.....	2,196	2,597
Paper and manufactures.....	637	665
Newsprint.....	595	613
Textile manufactures.....	374	475
Burlaps.....	71	79
Cotton manufactures.....	80	124
Wool manufactures.....	90	119
Machinery, total.....	240	277
Agricultural implements and tractors.....	73	82
Vehicles and parts.....	119	161
Automobiles, new <sup>3</sup> .....	46	70
Steel-mill manufactures.....	78	93
Clocks, watches and parts.....	67	66
Other.....	681	860

<sup>1</sup> Under 90 drawbar horsepower. <sup>2</sup> Excludes pile, upholstery and drapery fabrics and remnants and mill ends.  
<sup>3</sup> Excludes tire fabrics.

<sup>1</sup> Includes ores of ferroalloying metals. <sup>2</sup> Includes ferroalloys. <sup>3</sup> Trucks, buses excluded.



# U. S. Exports and General Imports by Countries and Areas

(Value in millions of dollars)

Source: U. S. Department of Commerce.

Area and country	Exports, including re-exports			General imports		
	1949	1954	1955	1949	1954	1955
<b>NORTH AND SOUTH AMERICA</b>						
Canada.....	1,925.5	2,767.2	3,206.2	1,550.8	2,376.7	2,651.5
20 American Republics.....	2,632.9	3,207.9	3,151.3	2,301.0	3,290.2	3,333.7
Mexico.....	454.4	634.0	699.9	243.5	328.2	396.8
Central American Republics.....	257.1	299.8	295.1	139.0	231.2	229.9
Costa Rica.....	26.2	40.5	43.2	22.4	33.1	28.1
El Salvador.....	24.8	41.2	46.8	40.2	61.4	61.9
Guatemala.....	43.7	47.6	56.5	43.3	65.5	71.1
Honduras.....	32.7	33.5	33.9	15.2	26.8	22.7
Nicaragua.....	14.8	37.1	38.7	6.7	26.0	25.6
Panama, Republic of.....	114.9	100.0	75.9	11.2	18.4	20.4
Cuba.....	374.9	429.3	451.2	387.5	401.3	421.8
Dominican Republic.....	36.9	52.3	60.1	24.4	72.0	62.2
Haiti.....	23.3	36.0	31.6	19.8	24.8	16.4
Argentina.....	123.5	122.6	147.8	97.5	103.0	126.0
Bolivia.....	34.6	30.7	38.7	48.5	46.9	40.6
Brazil.....	365.0	456.0	240.5	551.8	681.7	632.2
Chile.....	138.5	74.9	90.9	152.5	197.3	200.3
Colombia.....	167.9	343.3	331.3	241.5	506.5	441.9
Ecuador.....	31.0	47.8	45.9	17.1	60.9	53.0
Paraguay.....	7.5	6.6	4.8	5.7	5.0	4.2
Peru.....	81.9	97.9	120.3	40.2	96.5	110.4
Uruguay.....	33.4	43.4	37.7	54.0	31.1	14.7
Venezuela.....	503.0	533.5	555.6	278.1	503.9	583.1
Netherlands Antilles.....	75.2	63.1	56.7	111.4	164.7	215.1
<b>EUROPE</b>						
Western Europe.....	3,973.0	3,366.8	4,147.4	909.0	2,038.6	2,391.9
Austria.....	149.7	37.3	55.9	9.6	29.8	34.2
Belgium and Luxembourg.....	300.9	270.0	318.6	94.2	191.7	243.2
Denmark.....	91.1	46.7	68.1	6.6	50.7	58.0
France.....	465.6	332.5	358.6	61.5	157.3	202.4
Germany, Western <sup>1</sup> .....	817.3	493.7	594.7	45.5	278.2	366.2
Greece.....	152.2	48.1	75.8	15.7	18.4	25.8
Iceland.....	7.4	12.4	15.4	2.2	9.6	6.8
Ireland (Eire).....	60.7	26.7	38.4	1.7	4.2	5.3
Italy.....	451.3	305.4	355.7	70.9	141.5	180.1
Trieste, Free Territory of.....	11.8	6.5	10.5	(X)	.1	.2
Netherlands.....	268.1	423.2	476.4	59.3	159.2	147.8
Norway.....	87.9	67.8	75.3	30.7	57.6	61.4
Portugal.....	50.6	24.7	34.0	13.6	25.8	27.4
Sweden.....	81.0	118.8	161.8	54.4	75.6	84.9
Switzerland.....	137.7	154.4	163.6	93.1	145.0	146.9
Turkey.....	82.9	79.3	96.0	55.7	64.7	56.7
United Kingdom.....	662.0	691.9	923.7	227.6	501.1	615.9
Other Western Europe, total.....	94.8	227.2	324.7	66.6	127.9	128.6
Finland.....	26.0	28.3	40.5	27.4	39.4	44.1
Spain.....	49.2	98.7	153.5	24.3	64.8	58.5
Yugoslavia.....	19.6	100.2	130.7	14.9	23.7	26.0
Soviet bloc.....	61.8	6.1	7.2	67.4	42.4	55.5
<b>ASIA AND OCEANIA</b>						
Western Asia.....	335.5	278.0	339.1	94.7	200.5	268.2
Iran.....	77.1	45.7	53.5	16.4	19.4	34.4
Iraq.....	12.2	27.6	33.9	5.7	16.3	31.6
Israel <sup>2</sup> .....	76.8	76.1	90.2	6.0	13.7	17.1
Kuwait.....	22.3	14.5	15.6	38.8	71.6	95.3
Lebanon.....	39.7	30.7	39.6	2.1	3.1	4.8
Saudi Arabia.....	81.6	43.3	69.0	19.9	59.0	56.3
Far East.....	1,823.7	1,890.9	1,992.1	1,214.5	1,432.0	1,777.1
Southern, southeastern, and eastern Asia.....	1,650.1	1,650.6	1,731.5	1,089.1	1,266.9	1,603.2
British Malaya.....	36.2	30.8	35.6	195.5	168.7	234.0
Ceylon.....	17.1	6.8	7.2	34.8	28.6	35.6
Hong Kong.....	113.6	46.1	49.6	4.3	11.8	15.3
India.....	240.4	161.6	187.4	238.8	200.1	221.4

Area and country	Exports, including re-exports			General imports		
	1949	1954	1955	1949	1954	1955
Indonesia, Republic of	119.4	71.4	74.9	120.4	166.7	211.8
Japan	466.1	679.9	643.1	82.0	279.0	432.0
Korea, Republic of <sup>a</sup>	49.9	87.0	126.2	1.4	19.7	6.1
Pakistan	41.0	32.9	54.6	27.7	23.4	30.4
Philippines, Republic of	424.9	325.7	339.2	204.7	262.2	251.4
Thailand (Siam)	28.9	42.6	49.9	48.0	54.3	104.2
Taiwan	22.7	94.2	105.4	1.7	5.5	6.4
Viet-Nam, Laos, and Cambodia	16.2	51.1	32.8	1.1	22.3	28.7
Australia	124.4	189.9	201.1	97.6	117.8	126.4
New Zealand	40.1	42.6	51.6	24.4	44.3	43.6
AFRICA						
Africa, total	590.8	569.5	587.6	337.5	604.5	618.7
Algeria	22.1	13.7	13.6	4.1	4.7	5.8
Angola	8.4	12.1	11.5	7.2	43.2	32.4
Belgian Congo	46.5	48.6	53.4	36.3	96.2	109.1
British East Africa, total <sup>a</sup>	16.8	6.7	10.1	22.4	32.2	39.0
British West Africa, total <sup>a</sup>	14.0	15.5	19.5	82.4	112.4	87.9
Egypt	50.0	40.2	78.5	9.4	20.5	25.4
Ethiopia	3.4	7.0	5.3	8.3	33.7	31.2
French Morocco	27.8	37.4	31.2	5.8	14.3	11.7
French West Africa, total <sup>a</sup>	33.2	20.7	24.8	2.4	48.3	44.4
Liberia	51.5	81.7	21.3	10.8	27.2	40.0
Rhodesia and Nyasaland, Federation of	9.6	10.5	12.2	15.3	47.2	66.3
Union of South Africa	257.4	228.9	260.6	116.4	90.6	95.5
STERLING AREA						
All sterling countries	1,760.1	1,635.8	2,025.0	1,156.0	1,542.8	1,800.3

<sup>1</sup> Data prior to 1953 represent combined trade with East and West Germany. <sup>2</sup> Small trade with Palestine included prior to Jan. 1954. <sup>3</sup> Data prior to 1953 represent combined trade with North and South Korea. <sup>4</sup> British Somaliland, Seychelles and dependencies, Mauritius and dependencies, and other British East Africa. <sup>5</sup> Gold Coast, Nigeria and British West Africa, n.e.c. <sup>6</sup> Cameroon, French Equatorial Africa, and other French West Africa.

## LEADING COUNTRIES IN RICHES AND RESOURCES

Source: *Encyclopaedia Britannica*.

The designation "nd" means that no data are available. In such cases, the relative rank of the nation is estimated.

### Mineral and Metal Production

ANTIMONY ORE (thousands of metric tons, 1954)	CHROMITE (thousands of metric tons, 1954)	COPPER (thousands of metric tons, smelter, 1955)
1. U. of So. Africa . . . . . 8.6	1. U. of So. Africa . . . . . 641.3	1. United States . . . . . 1,053.9
2. China . . . . . 8.0 <sup>1</sup>	2. U.S.S.R. . . . . 600.0 <sup>1</sup>	2. Chile . . . . . 433.6
3. Bolivia . . . . . 5.2	3. Turkey . . . . . 561.5	3. No. Rhodesia . . . . . 348.0
4. Mexico . . . . . 4.2	4. So. Rhodesia . . . . . 401.4	4. U.S.S.R. . . . . 335.0
5. Algeria . . . . . 2.3	5. Philippines . . . . . 401.2	5. Canada . . . . . 264.0
6. Czechoslovakia . . . . . 1.6 <sup>2</sup>	6. United States . . . . . 148.2	6. West Germany . . . . . 253.3
7. Yugoslavia . . . . . 1.6	7. Yugoslavia . . . . . 124.5	7. United Kingdom . . . . . 231.6
8. Turkey . . . . . 1.0	8. New Caledonia . . . . . 84.2	8. Belgian Congo . . . . . 230.8
9. Peru . . . . . .8	9. West Indies . . . . . 64.0 <sup>1</sup>	9. Belgium . . . . . 156.9
10. United States . . . . . .7	10. India . . . . . 50.0 <sup>1</sup>	10. Japan . . . . . 113.3
<sup>1</sup> Estimate. <sup>2</sup> 1953.	<sup>1</sup> Estimate.	<sup>1</sup> Including secondary copper. <sup>2</sup> Refined copper. <sup>3</sup> Exports. <sup>4</sup> Secondary and refined copper.
BAUXITE (thousands of metric tons, 1954)	COAL (millions of metric tons, 1955)	GOLD (thousands of fine oz refinery production, 1954)
1. Surinam . . . . . 3,426	1. United States . . . . . 450.3 <sup>1</sup>	1. U. of So. Africa . . . . . 13,237.1
2. British Guiana . . . . . 2,337	2. U.S.S.R. . . . . 391.1 <sup>1</sup>	2. U.S.S.R. . . . . 9,000.0
3. West Indies . . . . . 2,030	3. United Kingdom . . . . . 225.1 <sup>2</sup>	3. Canada . . . . . 4,368.4
4. United States . . . . . 1,937	4. West Germany . . . . . 130.7	4. United States . . . . . 1,859.0
5. Hungary . . . . . 1,300 <sup>1</sup>	5. Poland . . . . . 94.5	5. Australia . . . . . 1,117.7
6. France . . . . . 1,270 <sup>2</sup>	6. France . . . . . 72.7 <sup>3</sup>	6. Gold Coast . . . . . 787.7
7. U.S.S.R. . . . . 1,000 <sup>1</sup>	7. China . . . . . 67.0 <sup>4</sup>	7. So. Rhodesia . . . . . 535.5
8. Yugoslavia . . . . . 681	8. Czechoslovakia . . . . . 57.6 <sup>4</sup>	8. Philippines . . . . . 416.6
9. Greece . . . . . 330 <sup>1</sup>	9. Japan . . . . . 42.4	9. Mexico . . . . . 386.6
10. Italy . . . . . 295	10. India . . . . . 38.8	10. Colombia . . . . . 377.7
<sup>1</sup> Estimate. <sup>2</sup> Including Saar and French overseas territories.	<sup>1</sup> Including lignite. <sup>2</sup> Excluding Northern Ireland. <sup>3</sup> Including Saar. <sup>4</sup> 1954.	<sup>1</sup> Estimate.

**IRON ORE** (millions of metric tons, 1955)<sup>1</sup>

1. United States	106.7
2. U.S.S.R.	71.9
3. France	50.3
4. Sweden	17.1
5. United Kingdom	16.5
6. Canada	12.9 <sup>2</sup>
7. West Germany	11.3
8. Venezuela	8.4
9. Luxemburg	7.2
10. China	6.0

<sup>1</sup> Approximate metal content: U.S. 50%; U.S.S.R., unknown; France, 35%; Sweden, 60%; U.K., 30%; Canada, 55%; West Germany, 30%; Venezuela, 65%; Luxemburg, 30%; China, unknown. <sup>2</sup> Shipments only.

**LEAD** (thousands of metric tons, refined, 1955)

1. United States	495.8
2. Australia	228.0
3. Mexico	211.2 <sup>1</sup>
4. U.S.S.R.	207.3 <sup>2</sup>
5. Canada	134.4
6. West Germany	107.6 <sup>3</sup>
7. France	92.6 <sup>4</sup>
8. Belgium	82.8
9. United Kingdom	79.0 <sup>5</sup>
10. Yugoslavia	75.6

<sup>1</sup> Lead content of ores mined. <sup>2</sup> 1954. <sup>3</sup> Smelter production. <sup>4</sup> Including secondary lead. <sup>5</sup> Smelter production, mostly secondary.

**MANGANESE ORE** (thousands of metric tons, 1954)

1. U.S.S.R.	4,000.0 <sup>1</sup>
2. India	1,219.3
3. U. of So. Africa	701.1
4. Gold Coast	467.6
5. French Morocco	400.4
6. Belgian Congo	384.9
7. Mexico	252.2
8. Cuba	234.7 <sup>2</sup>
9. Brazil	200.0 <sup>1</sup>
10. United States	192.0 <sup>1</sup>

<sup>1</sup> Estimate. <sup>2</sup> Exports.

**PETROLEUM, CRUDE** (millions of bbls., 1955)

1. United States	2,406
2. Venezuela	787
3. U.S.S.R.	500
4. Kuwait	392
5. Saudi Arabia	352
6. Iraq	238
7. Canada	125
8. Iran	120
9. Mexico	90
10. Indonesia	88

**PIG IRON AND FERRO-ALLOYS** (millions of metric tons, 1955)

1. United States	70.6 <sup>1</sup>
2. U.S.S.R.	33.3
3. West Germany	16.5
4. France	13.8 <sup>2</sup>
5. United Kingdom	12.7 <sup>1</sup>
6. Belgium	5.4
7. Japan	5.2
8. Luxemburg	3.1
9. Canada	3.1
10. Czechoslovakia	2.9 <sup>3</sup>

<sup>1</sup> Excluding electric furnace production. <sup>2</sup> Including Saar. <sup>3</sup> 1954 estimate.

**SILVER** (millions of fine oz., smelter, 1954)

1. Mexico	39.9
2. United States	35.6
3. Canada	30.7
4. U.S.S.R.	25.0 <sup>1</sup>
5. Peru	20.4
6. Australia	13.8
7. Japan	6.1
8. Bolivia	5.1
9. Belgian Congo	4.6
10. Honduras	3.4

<sup>1</sup> Estimate.

**TIN ORE** (thousands of metric tons, 1954)

1. Malaya	74.8
2. Indonesia	44.2
3. Bolivia	35.5
4. Belgian Congo	18.6
5. China	12.3 <sup>1</sup>
6. Thailand	12.0
7. Nigeria	9.8
8. Australia	2.4
9. Burma	1.2
10. United Kingdom	1.2

<sup>1</sup> Estimate.

**URANIUM**

No production data are available. The most important deposits are probably in the Belgian Congo; also the Northwest Territories, Canada; and the Colorado plateau area of Colorado, New Mexico, Arizona and Utah in the United States. Deposits have also been found or reported in Alaska, Australia, Bolivia, Brazil, Bulgaria, Burma, Ceylon, Chile, China (Manchuria), Czechoslovakia, England, Ethiopia, Finland, France, Germany, Greenland, Hungary, India, Indonesia, Iran, Madagascar, Mexico, Mozambique, Nigeria, Norway, Panama, Philippines, Portugal, Sardinia, South Africa, Spain, Sweden and the U.S.S.R.

**ZINC** (thousands of metric tons, smelter, 1955)

1. United States	957.1 <sup>1</sup>
2. Mexico	269.4 <sup>2</sup>
3. U.S.S.R.	250.0 <sup>3</sup>
4. Canada	232.8
5. Belgium	211.9 <sup>1</sup>
6. West Germany	196.6 <sup>1</sup>
7. France	137.4 <sup>1</sup>
8. Poland	125.0 <sup>3</sup>
9. Japan	113.5 <sup>4</sup>
10. Australia	102.4

<sup>1</sup> Including secondary zinc. <sup>2</sup> Zinc content of ores. <sup>3</sup> 1954 estimate. <sup>4</sup> Refined, including secondary zinc.

**Agriculture****BARLEY** (thousands of metric tons, 1955)

1. United States	8,512
2. U.S.S.R.	7,020 <sup>1</sup>
3. China	6,950 <sup>2</sup>
4. Canada	5,482
5. Turkey	3,000
6. United Kingdom	2,983
7. India	2,831
8. France	2,665
9. Japan	2,408
10. Denmark	2,205

<sup>1</sup> 1950 estimate. <sup>2</sup> 1952; 22 provinces.

**BUTTER** (thousands of metric tons, factory production, 1955)

1. United States	628
2. U.S.S.R.	459 <sup>1</sup>

3. France	305 <sup>2</sup>
4. West Germany	290
5. New Zealand	193 <sup>3</sup>
6. Australia	191 <sup>3</sup>
7. Denmark	165
8. Canada	144
9. Sweden	84
10. Netherlands	74

<sup>1</sup> Official estimate. <sup>2</sup> 1954. <sup>3</sup> Year ending June 30, 1955.

**CATTLE** (number in millions, various dates)

1. India	150.3 <sup>1</sup>
2. United States	95.4 <sup>2</sup>
3. U.S.S.R.	67.1 <sup>2</sup>
4. Brazil	61.4 <sup>3</sup>
5. Argentina	45.3 <sup>1</sup>
6. China	28.8 <sup>4</sup>
7. Pakistan	24.1 <sup>5</sup>

8. Ethiopia	21.0 <sup>4</sup>
9. France	17.3 <sup>3</sup>
10. Australia	15.8 <sup>3</sup>

<sup>1</sup> 1952. <sup>2</sup> 1955. <sup>3</sup> 1954. <sup>4</sup> 1953. <sup>5</sup> 1951-52.

**CHEESE** (thousands of metric tons, factory, 1955)

1. United States	615
2. Italy	312 <sup>1</sup>
3. France	270 <sup>2</sup>
4. U.S.S.R.	nd
5. Netherlands	156
6. West Germany	155
7. Argentina	108 <sup>3</sup>
8. New Zealand	99 <sup>4</sup>
9. Denmark	88
10. Sweden	54

<sup>1</sup> 1954. <sup>2</sup> 1953. <sup>3</sup> 1954; including farm cheese. <sup>4</sup> Year ending June 30, 1955.



**COTTON, GINNED** (thousands of bales, 500 lb. gross, 1955)

1. U.S.S.R.	16,800 <sup>1</sup>
2. United States	14,843
3. India	4,200
4. China	3,100 <sup>2</sup>
5. Mexico	2,050
6. Egypt	1,806
7. Brazil	1,630 <sup>3</sup>
8. Pakistan	1,400
9. Turkey	675
10. Argentina	530 <sup>3</sup>

<sup>1</sup> 1950. <sup>2</sup> 1954; including Manchuria. <sup>3</sup> 1954.

**FORESTS** (millions of acres, latest data available)<sup>1</sup>

1. U.S.S.R.	2,275
2. Brazil	975
3. Canada	835
4. United States	825 <sup>2</sup>
5. Fr. West Africa	420
6. Fr. Eq. Africa	340 <sup>3</sup>
7. Indonesia	300
8. Belgian Congo	250
9. Sudan	225
10. China	210

<sup>1</sup> Of present or potential value. <sup>2</sup> Including Alaska. <sup>3</sup> Including savannah.

**HOGS** (number in millions, 1955)

1. United States	55.0
2. U.S.S.R.	52.2
3. China	nd
4. Brazil	32.7 <sup>1</sup>
5. West Germany	14.5 <sup>1</sup>
6. Poland	10.9
7. East Germany	8.4 <sup>1</sup>
8. Mexico	7.8 <sup>1</sup>
9. France	7.8
10. Canada	6.1

<sup>1</sup> 1954.

**LAND, ARABLE** (millions of ac., latest data available, 1956)<sup>1</sup>

1. U.S.S.R.	555
2. United States	478
3. India	325 <sup>2</sup>
4. China	250
5. Belgian Congo	120 <sup>3</sup>
6. Canada	97
7. Argentina	75
8. Fr. Eq. Africa	74
9. Pakistan	60
10. France	52

<sup>1</sup> Actually planted in crops, plus temporary meadows and pastures. <sup>2</sup> Including Kashmir. <sup>3</sup> Including inland water.

**MEAT** (thousands of metric tons, 1955)<sup>1</sup>

1. United States	11,568
2. France	2,370 <sup>2</sup>
3. Argentina	1,945 <sup>2</sup>
4. U.S.S.R.	nd
5. West Germany	1,879

6. United Kingdom	1,507
7. Brazil	1,375 <sup>2</sup>
8. Poland	1,240 <sup>3</sup>
9. Australia	1,211 <sup>4</sup>
10. Denmark	759

<sup>1</sup> Chiefly beef, veal, mutton, lamb and pork produced in slaughtering houses or packing plants. <sup>2</sup> 1954. <sup>3</sup> 1950. <sup>4</sup> Including farm slaughter; year ending June 30, 1955.

**MILK** (thousands of metric tons, 1955)

1. United States	55,992
2. U.S.S.R.	nd
3. France	18,600 <sup>1</sup>
4. West Germany	16,910
5. United Kingdom	9,108 <sup>2</sup>
6. Canada	7,836
7. Australia	6,180 <sup>3</sup>
8. New Zealand	5,300 <sup>1</sup>
9. Denmark	5,135
10. Netherlands	4,885 <sup>4</sup>

<sup>1</sup> 1954. <sup>2</sup> Milk sold through Milk Marketing Schemes. <sup>3</sup> Year ending June 30, 1955. <sup>4</sup> Milk delivered by farmers.

**OATS** (thousands of metric tons, 1955)

1. United States	22,872
2. U.S.S.R.	nd
3. Canada	6,228
4. France	3,580
5. United Kingdom	2,479
6. West Germany	2,478
7. Poland	2,143
8. East Germany	1,140 <sup>1</sup>
9. Czechoslovakia	966 <sup>2</sup>
10. Denmark	870

<sup>1</sup> 1950. <sup>2</sup> Average 1949-52.

**POTATOES** (thousands of metric tons, 1955)

1. U.S.S.R.	147,800 <sup>1</sup>
2. Poland	31,497 <sup>2</sup>
3. West Germany	22,874
4. France	16,986
5. East Germany	16,753
6. United States	9,690
7. United Kingdom	7,442
8. Czechoslovakia	6,870 <sup>3</sup>
9. Netherlands	3,907
10. Spain	3,535

<sup>1</sup> Announced 1955 plan. <sup>2</sup> Average 1949-52.

**RICE** (thousands of metric tons, 1955-56)

1. China	48,300 <sup>1</sup>
2. India	34,000
3. Japan	13,700
4. Pakistan	13,000
5. Indonesia	10,940 <sup>2</sup>
6. Thailand	7,710
7. Burma	6,700
8. South Korea	3,270 <sup>3</sup>
9. Brazil	3,266 <sup>3</sup>
10. Philippines	3,202 <sup>2</sup>

<sup>1</sup> 1953. <sup>2</sup> 1954-55. <sup>3</sup> 1954.

**RUBBER** (thousands of metric tons, 1955)

1. United States	988 <sup>1</sup>
2. Indonesia	73 <sup>2</sup>
3. Malaya	64 <sup>2</sup>
4. U.S.S.R.	24 <sup>2</sup>
5. Thailand	13 <sup>2</sup>
6. Canada	10 <sup>2</sup>
7. Ceylon	9 <sup>2</sup>
8. Cambodia, Vietnam	9 <sup>2</sup>
9. Sarawak	4 <sup>2</sup>
10. Liberia	3 <sup>2</sup>

<sup>1</sup> Synthetic only. <sup>2</sup> 1951; synthetic only. <sup>3</sup> Exports.

**SHEEP** (number in millions, various dates)

1. Australia	130.8
2. U.S.S.R.	125.0
3. Argentina	55.5
4. India	40.0
5. New Zealand	39.1
6. U. of So. Africa	37.1
7. United States	30.5
8. Turkey	26.8
9. Uruguay	26.8
10. Spain	20.0

<sup>1</sup> 1955. <sup>2</sup> 1954. <sup>3</sup> 1952.

**SUGAR** (thousands of metric tons, raw value, 1955-56)

1. Cuba	4,500
2. U.S.S.R.	2,700
3. Brazil	2,200
4. United States	2,150
5. India	1,890
6. France	1,510
7. West Germany	1,310
8. Philippines	1,090
9. Puerto Rico	1,060
10. Hawaii	1,010

**WHEAT** (thousands of metric tons, 1955)

1. United States	25,338
2. U.S.S.R.	nd
3. China	21,770
4. Canada	13,44 <sup>1</sup>
5. France	10,37 <sup>1</sup>
6. Italy	9,50 <sup>1</sup>
7. India	8,67 <sup>1</sup>
8. Turkey	7,21 <sup>1</sup>
9. Australia	5,13 <sup>1</sup>
10. Argentina	4,82 <sup>1</sup>

<sup>1</sup> 1952; 22 provinces. <sup>2</sup> Including spelt.

**WOOL** (thousands of metric tons, greasy basis, 1955)

1. Australia	58 <sup>1</sup>
2. New Zealand	19 <sup>1</sup>
3. Argentina	16 <sup>1</sup>
4. U.S.S.R.	nd
5. U. of So. Africa	13 <sup>1</sup>
6. United States	13 <sup>1</sup>
7. Uruguay	9 <sup>1</sup>
8. United Kingdom	4 <sup>1</sup>
9. Spain	4 <sup>1</sup>
10. China	nd

<sup>1</sup> 1954. <sup>2</sup> 1954-55.

## Industry, Commerce, Communications

**AIRLINES** (millions of passenger miles flown, monthly average, 1955)

1. United States	2,027
2. France	165
3. United Kingdom	149
4. U.S.S.R.	nd
5. Canada	97
6. Australia	92
7. Brazil	83 <sup>1</sup>
8. Netherlands	78
9. Mexico	72 <sup>1</sup>
10. Belgium	29

<sup>1</sup> 1954.

**ALUMINUM** (thousands of metric tons, 1955)

1. United States	1,747.2 <sup>1</sup>
2. U.S.S.R.	575.0 <sup>2</sup>
3. Canada	552.0
4. West Germany	230.3 <sup>1</sup>
5. France	161.0 <sup>1</sup>
6. United Kingdom	122.0 <sup>1</sup>
7. Norway	77.9
8. Austria	67.8
9. Japan	67.1 <sup>1</sup>
10. Italy	61.4

<sup>1</sup> Including secondary aluminum. <sup>2</sup> 1954.

**ELECTRICITY** (millions of kwh, monthly average, 1955)

1. United States	45,534
2. U.S.S.R.	14,160
3. United Kingdom	6,679 <sup>1</sup>
4. Canada	6,358
5. West Germany	6,315
6. Japan	5,297
7. France	3,897
8. Italy	3,105
9. Sweden	2,081
10. Norway	1,856

<sup>1</sup> Excluding Northern Ireland.

**EMPLOYMENT INDEX**

non-agricultural, 1955; 1953 = 100<sup>1</sup>

1. Yugoslavia	124
2. West Germany	111
3. Austria	110
4. Japan	109
5. Australia	107
6. Luxemburg	107 <sup>2</sup>
7. U. of So. Africa	105 <sup>3</sup>
8. Norway	104
9. Canada	103
10. United Kingdom	103 <sup>4</sup>

<sup>1</sup> Data on U.S.S.R. and satellites not included. <sup>2</sup> Wage earners only. <sup>3</sup> Excluding commerce. <sup>4</sup> Excluding Northern Ireland.

**EXPORT INDEX** (1955;

1953 = 100)<sup>1</sup>

1. Japan	162
2. Israel	158 <sup>2</sup>
3. Fr. Eq. Africa	150
4. West Germany	142 <sup>3</sup>
5. Austria	136
6. Chile	135 <sup>2</sup>

7. Burma	132 <sup>2</sup>
8. Vietnam	132
9. France	130
10. Finland	125

<sup>1</sup> Data on U.S.S.R. and satellites not included. <sup>2</sup> 1954. <sup>3</sup> Including gold.

**IMPORT INDEX** (1955;

1953 = 100)<sup>1</sup>

1. Austria	198
2. Australia	166 <sup>2</sup>
3. West Germany	152 <sup>2</sup>
4. Finland	150
5. Fr. Eq. Africa	144
6. Netherlands	141
7. New Zealand	132 <sup>4</sup>
8. Switzerland	131
9. Sweden	128
10. Brazil	126 <sup>4</sup>

<sup>1</sup> Data on U.S.S.R. and satellites not included. <sup>2</sup> Year ending June 30, 1955. <sup>3</sup> Including gold. <sup>4</sup> 1954.

**INDUSTRIAL PRODUCTION INDEX** (1955; 1953 = 100)

1. Yugoslavia	132
2. West Germany	130 <sup>1</sup>
3. Greece	130 <sup>2</sup>
4. U.S.S.R.	127
5. France	120 <sup>1</sup>
6. India	119 <sup>3</sup>
7. Netherlands	119
8. Italy	118
9. Japan	117
10. Luxemburg	116

<sup>1</sup> Excluding construction. <sup>2</sup> Excluding mining and gas manufacture. <sup>3</sup> Manufacturing and coal mining.

**MERCHANT FLEETS** (millions of gross tons, 1955)<sup>1</sup>

1. United States	25.5 <sup>2</sup>
2. United Kingdom	17.4
3. Norway	6.6
4. Panamá	3.9
5. Italy	3.6
6. France	3.5
7. Liberia	3.5
8. Japan	3.2
9. Netherlands	3.1
10. Sweden	2.5

<sup>1</sup> Ships of 1,000 gross tons or more. <sup>2</sup> Not including Great Lakes shipping.

**MOTOR VEHICLES** (production in thousands, 1955)

1. United States	9,169 <sup>1</sup>
2. United Kingdom	1,237
3. West Germany	909
4. France	725
5. Canada	454
6. U.S.S.R.	445
7. Italy	269
8. Japan	60
9. Australia	55 <sup>2</sup>
10. Sweden	29 <sup>3</sup>

<sup>1</sup> Factory sales. <sup>2</sup> 1954. <sup>3</sup> 1953.

**RAILWAYS** (millions of metric freight-tons carried, monthly average, 1955)

1. United States	197.9 <sup>1</sup>
2. U.S.S.R.	nd
3. West Germany	23.5
4. United Kingdom	23.3 <sup>2</sup>
5. France	16.0
6. Poland	nd
7. Japan	12.7
8. Canada	11.8 <sup>3</sup>
9. India	11.1 <sup>4</sup>
10. Belgium	5.7 <sup>5</sup>

<sup>1</sup> Class I railways only. <sup>2</sup> Excluding Northern Ireland. <sup>3</sup> 1953. <sup>4</sup> Year ending March 30, 1955; class I railways only. <sup>5</sup> Carload lots only.

**STEEL, CRUDE** (millions of metric tons, 1955)

1. United States	106.2
2. U.S.S.R.	45.2
3. West Germany	21.3
4. United Kingdom	20.1
5. France	15.8 <sup>1</sup>
6. Japan	9.4
7. Belgium	5.9
8. Italy	5.4
9. Czechoslovakia	4.4 <sup>2</sup>
10. Poland	4.0 <sup>3</sup>

<sup>1</sup> Including Saar. <sup>2</sup> 1954 estimate. <sup>3</sup> 1954.

**TELEPHONES** (number per 100 population, 1955)

1. United States	32.2
2. Sweden	29.0
3. Canada	25.0
4. New Zealand	23.3
5. Switzerland	23.0
6. Denmark	19.5
7. Australia	16.9
8. Norway	16.4 <sup>1</sup>
9. Iceland	16.4
10. United Kingdom	12.7

<sup>1</sup> 1954.

## Human Resources

**BIRTH RATE, HIGHEST ANNUAL** (per 1,000 pop., 1955)<sup>1</sup>

1. Mexico	46.1
2. China	nd
3. Rumania	nd
4. Thailand	31.0 <sup>2</sup>
5. Poland	30.5 <sup>3</sup>
6. India	30.5 <sup>4</sup>
7. Canada	28.3 <sup>5</sup>
8. Yugoslavia	26.9
9. U. of So. Africa	26.0 <sup>6</sup>
10. U.S.S.R.	25.6 <sup>7</sup>

<sup>1</sup> Larger nations only; all Central American and most smaller South American and Caribbean nations have annual birth rates usually exceeding 35.0 (Guatemala led in 1955 with 51.7). Other smaller nations usually exceeding 35.0 include Burma, Egypt, Formosa, Ceylon and Jordan. <sup>2</sup> 1953. <sup>3</sup> 1950. <sup>4</sup> Registration area only. <sup>5</sup> Excluding Yukon and Northwest Territories. <sup>6</sup> White population only. <sup>7</sup> Official estimate.

**DEATH RATE, LOWEST ANNUAL** (per 1,000 pop., 1955)<sup>1</sup>

1. Iran	7.1 <sup>2</sup>
2. Netherlands	7.6
3. Japan	7.8
4. Canada	8.1 <sup>3</sup>
5. Argentina	8.4 <sup>2</sup>
6. U.S.S.R.	8.4 <sup>4</sup>
7. Australia	8.9 <sup>5</sup>
8. Italy	9.2
9. United States	9.3
10. Spain	9.3

<sup>1</sup> Following smaller nations not included in table above: Israel, 5.8 (Jewish population only); Syria, 5.9 (1954); Puerto Rico, 7.1; Uruguay, 7.3; Formosa, 8.1 (1954); Norway, 8.3; Denmark, 8.8; New Zealand, 9.0

(excluding Maoris); Peru, 9.1 (1954); Finland, 9.3; Panama, 9.3. <sup>2</sup> 1954. <sup>3</sup> Excluding Yukon and Northwest Territories. <sup>4</sup> Official estimate. <sup>5</sup> Excluding full-blooded aborigines.

**ARMED FORCES** (army, navy, air; strength in thousands, 1956)<sup>1</sup>

1. U.S.S.R.	4,600
2. China	4,000
3. United States	2,820
4. United Kingdom	750
5. France	750
6. South Korea	700
7. Yugoslavia	650 <sup>2</sup>
8. Spain	460 <sup>2</sup>
9. Poland	450
10. Rumania	450

<sup>1</sup> Estimates. <sup>2</sup> 1954.

**NAVIES** (number of warships, 1955)<sup>1</sup>

1. United States	59 <sup>2</sup>
2. U.S.S.R.	17 <sup>3</sup>
3. United Kingdom	12 <sup>4</sup>
4. France	2 <sup>5</sup>
5. Spain	2 <sup>6</sup>
6. Argentina	2 <sup>7</sup>
7. Sweden	2 <sup>8</sup>
8. Canada	2 <sup>9</sup>
9. Netherlands	2 <sup>10</sup>
10. Italy	2 <sup>11</sup>

<sup>1</sup> Excluding submarines, frigates and escort types; estimated number submarines, Dec. 1955: U.S.S.R., 47; U.S., 202; United Kingdom, 59; Sweden, 21; France 14; Turkey, 12.

## FEDERAL INCOME TAX

If you are a citizen or a resident of the United States, and if your gross income for the year amounts to \$600 or more, you are required to file a return. This requirement applies to minors, as well as adults, and must be met even if you do not pay a tax.

If you are more than 65 years old, you are required to file only if your gross income is \$1,200 or more.

You must pay part of your tax in installments in the year in which you earned the income. This is the "pay-as-you-go" system. You are generally required to pay the rest of your tax when you file your return. It may turn out that you don't owe any additional tax when you file your

return, or you may even be entitled to refund, in which case the refund will be paid to you automatically after your return is filed.

The "pay-as-you-go" system works in two ways, through withholding and declaration of estimated tax. You may be subject to either or both of these requirements.

If you are married, you and your wife are allowed to report your combined income and your combined deductions on a single return. This is called a joint return. Your combined income is then taxed as though half were yours and half hers. This will usually result in a lower tax.

## Withholding Table for Employees Paid Weekly

If the wages are—		And the number of withholding exemptions claimed is—										
At least	But less than	The amount of tax to be withheld shall be—										
		0	1	2	3	4	5	6	7	8	9	10 or more
\$0.	\$13.	18% of wages	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$13.	\$14.	\$2.40	.10	0	0	0	0	0	0	0	0	0
\$14.	\$15.	2.60	.30	0	0	0	0	0	0	0	0	0
\$15.	\$16.	2.80	.50	0	0	0	0	0	0	0	0	0
\$16.	\$17.	3.00	.70	0	0	0	0	0	0	0	0	0
\$17.	\$18.	3.20	.80	0	0	0	0	0	0	0	0	0
\$18.	\$19.	3.30	1.00	0	0	0	0	0	0	0	0	0
\$19.	\$20.	3.50	1.20	0	0	0	0	0	0	0	0	0
\$20.	\$21.	3.70	1.40	0	0	0	0	0	0	0	0	0
\$21.	\$22.	3.90	1.60	0	0	0	0	0	0	0	0	0
\$22.	\$23.	4.10	1.70	0	0	0	0	0	0	0	0	0
\$23.	\$24.	4.20	1.90	0	0	0	0	0	0	0	0	0
\$24.	\$25.	4.40	2.10	0	0	0	0	0	0	0	0	0
\$25.	\$26.	4.60	2.30	0	0	0	0	0	0	0	0	0
\$26.	\$27.	4.80	2.50	.20	0	0	0	0	0	0	0	0
\$27.	\$28.	5.00	2.60	.30	0	0	0	0	0	0	0	0



If the wages are—		And the number of withholding exemptions claimed is—										
At least	But less than	0	1	2	3	4	5	6	7	8	9	10 or more
		The amount of tax to be withheld shall be—										
\$28.	\$29.	5.10	2.80	.50	0	0	0	0	0	0	0	0
\$29.	\$30.	5.30	3.00	.70	0	0	0	0	0	0	0	0
\$30.	\$31.	5.50	3.20	.90	0	0	0	0	0	0	0	0
\$31.	\$32.	5.70	3.40	1.10	0	0	0	0	0	0	0	0
\$32.	\$33.	5.90	3.50	1.20	0	0	0	0	0	0	0	0
\$33.	\$34.	6.00	3.70	1.40	0	0	0	0	0	0	0	0
\$34.	\$35.	6.20	3.90	1.60	0	0	0	0	0	0	0	0
\$35.	\$36.	6.40	4.10	1.80	0	0	0	0	0	0	0	0
\$36.	\$37.	6.60	4.30	2.00	0	0	0	0	0	0	0	0
\$37.	\$38.	6.80	4.40	2.10	0	0	0	0	0	0	0	0
\$38.	\$39.	6.90	4.60	2.30	0	0	0	0	0	0	0	0
\$39.	\$40.	7.10	4.80	2.50	.20	0	0	0	0	0	0	0
\$40.	\$41.	7.30	5.00	2.70	.40	0	0	0	0	0	0	0
\$41.	\$42.	7.50	5.20	2.90	.50	0	0	0	0	0	0	0
\$42.	\$43.	7.70	5.30	3.00	.70	0	0	0	0	0	0	0
\$43.	\$44.	7.80	5.50	3.20	.90	0	0	0	0	0	0	0
\$44.	\$45.	8.00	5.70	3.40	1.10	0	0	0	0	0	0	0
\$45.	\$46.	8.20	5.90	3.60	1.30	0	0	0	0	0	0	0
\$46.	\$47.	8.40	6.10	3.80	1.40	0	0	0	0	0	0	0
\$47.	\$48.	8.60	6.20	3.90	1.60	0	0	0	0	0	0	0
\$48.	\$49.	8.70	6.40	4.10	1.80	0	0	0	0	0	0	0
\$49.	\$50.	8.90	6.60	4.30	2.00	0	0	0	0	0	0	0
\$50.	\$51.	9.10	6.80	4.50	2.20	0	0	0	0	0	0	0
\$51.	\$52.	9.30	7.00	4.70	2.30	0	0	0	0	0	0	0
\$52.	\$53.	9.50	7.10	4.80	2.50	.20	0	0	0	0	0	0
\$53.	\$54.	9.60	7.30	5.00	2.70	.40	0	0	0	0	0	0
\$54.	\$55.	9.80	7.50	5.20	2.90	.60	0	0	0	0	0	0
\$55.	\$56.	10.00	7.70	5.40	3.10	.80	0	0	0	0	0	0
\$56.	\$57.	10.20	7.90	5.60	3.20	.90	0	0	0	0	0	0
\$57.	\$58.	10.40	8.00	5.70	3.40	1.10	0	0	0	0	0	0
\$58.	\$59.	10.50	8.20	5.90	3.60	1.30	0	0	0	0	0	0
\$59.	\$60.	10.70	8.40	6.10	3.80	1.50	0	0	0	0	0	0
\$60.	\$62.	\$11.00	\$8.70	\$6.40	\$4.10	\$1.70	\$0	\$0	\$0	\$0	\$0	\$0
\$62.	\$64.	11.30	9.00	6.70	4.40	2.10	0	0	0	0	0	0
\$64.	\$66.	11.70	9.40	7.10	4.80	2.50	.20	0	0	0	0	0
\$66.	\$68.	12.10	9.80	7.40	5.10	2.80	.50	0	0	0	0	0
\$68.	\$70.	12.40	10.10	7.80	5.50	3.20	.90	0	0	0	0	0
\$70.	\$72.	12.80	10.50	8.20	5.90	3.50	1.20	0	0	0	0	0
\$72.	\$74.	13.10	10.80	8.50	6.20	3.90	1.60	0	0	0	0	0
\$74.	\$76.	13.50	11.20	8.90	6.60	4.30	2.00	0	0	0	0	0
\$76.	\$78.	13.90	11.60	9.20	6.90	4.60	2.30	0	0	0	0	0
\$78.	\$80.	14.20	11.90	9.60	7.30	5.00	2.70	.40	0	0	0	0
\$80.	\$82.	14.60	12.30	10.00	7.70	5.30	3.00	.70	0	0	0	0
\$82.	\$84.	14.90	12.60	10.30	8.00	5.70	3.40	1.10	0	0	0	0
\$84.	\$86.	15.30	13.00	10.70	8.40	6.10	3.80	1.50	0	0	0	0
\$86.	\$88.	15.70	13.40	11.00	8.70	6.40	4.10	1.80	0	0	0	0
\$88.	\$90.	16.00	13.70	11.40	9.10	6.80	4.50	2.20	0	0	0	0
\$90.	\$92.	16.40	14.10	11.80	9.50	7.10	4.80	2.50	.20	0	0	0
\$92.	\$94.	16.70	14.40	12.10	9.80	7.50	5.20	2.90	.60	0	0	0
\$94.	\$96.	17.10	14.80	12.50	10.20	7.90	5.60	3.30	.90	0	0	0
\$96.	\$98.	17.50	15.20	12.80	10.50	8.20	5.90	3.60	1.30	0	0	0
\$98.	\$100.	17.80	15.50	13.20	10.90	8.60	6.30	4.00	1.70	0	0	0
\$100.	\$105.	18.50	16.10	13.80	11.50	9.20	6.90	4.60	2.30	0	0	0
\$105.	\$110.	19.40	17.00	14.70	12.40	10.10	7.80	5.50	3.20	.90	0	0
\$110.	\$115.	20.30	17.90	15.60	13.30	11.00	8.70	6.40	4.10	1.80	0	0
\$115.	\$120.	21.20	18.80	16.50	14.20	11.90	9.60	7.30	5.00	2.70	.40	0
\$120.	\$125.	22.10	19.70	17.40	15.10	12.80	10.50	8.20	5.90	3.60	1.30	0
\$125.	\$130.	23.00	20.60	18.30	16.00	13.70	11.40	9.10	6.80	4.50	2.20	0

If the wages are—		And the number of withholding exemptions claimed is—										
At least	But less than	0	1	2	3	4	5	6	7	8	9	10 or more
		The amount of tax to be withheld shall be—										
\$130.....	\$135.....	23.90	21.50	19.20	16.90	14.60	12.30	10.00	7.70	5.40	3.10	2.80
\$135.....	\$140.....	24.80	22.40	20.10	17.80	15.50	13.20	10.90	8.60	6.30	4.00	1.80
\$140.....	\$145.....	25.70	23.30	21.00	18.70	16.40	14.10	11.80	9.50	7.20	4.90	2.60
\$145.....	\$150.....	26.60	24.20	21.90	19.60	17.30	15.00	12.70	10.40	8.10	5.80	3.50
\$150.....	\$160.....	27.90	25.60	23.30	21.00	18.70	16.40	14.10	11.70	9.40	7.10	4.80
\$160.....	\$170.....	29.70	27.40	25.10	22.80	20.50	18.20	15.90	13.50	11.20	8.90	6.60
\$170.....	\$180.....	31.50	29.20	26.90	24.60	22.30	20.00	17.70	15.30	13.00	10.70	8.40
\$180.....	\$190.....	33.30	31.00	28.70	26.40	24.10	21.80	19.50	17.10	14.80	12.50	10.20
\$190.....	\$200.....	35.10	32.80	30.50	28.20	25.90	23.60	21.30	18.90	16.60	14.30	12.00
\$200 and over.....		36.00	33.70	31.40	29.10	26.80	24.50	22.20	19.80	17.50	15.20	12.90
		18 percent of the excess over \$200 plus—										

Rate Table for Separate Returns

If your taxable income is:				Your tax is:			
Not over \$2,000 .....				20% of the taxable income			
Over \$ 2,000 but not over \$ 4,000 .....				\$ 400, plus 22% of excess over \$ 2,000 .....			
Over \$ 4,000 but not over \$ 6,000 .....				\$ 840, plus 26% of excess over \$ 4,000 .....			
Over \$ 6,000 but not over \$ 8,000 .....				\$ 1,360, plus 30% of excess over \$ 6,000 .....			
Over \$ 8,000 but not over \$ 10,000 .....				\$ 1,960, plus 34% of excess over \$ 8,000 .....			
Over \$ 10,000 but not over \$ 12,000 .....				\$ 2,640, plus 38% of excess over \$ 10,000 .....			
Over \$ 12,000 but not over \$ 14,000 .....				\$ 3,400, plus 43% of excess over \$ 12,000 .....			
Over \$ 14,000 but not over \$ 16,000 .....				\$ 4,260, plus 47% of excess over \$ 14,000 .....			
Over \$ 16,000 but not over \$ 18,000 .....				\$ 5,200, plus 50% of excess over \$ 16,000 .....			
Over \$ 18,000 but not over \$ 20,000 .....				\$ 6,200, plus 53% of excess over \$ 18,000 .....			
Over \$ 20,000 but not over \$ 22,000 .....				\$ 7,260, plus 56% of excess over \$ 20,000 .....			
Over \$ 22,000 but not over \$ 26,000 .....				\$ 8,380, plus 59% of excess over \$ 22,000 .....			
Over \$ 26,000 but not over \$ 32,000 .....				\$ 10,740, plus 62% of excess over \$ 26,000 .....			
Over \$ 32,000 but not over \$ 38,000 .....				\$ 14,460, plus 65% of excess over \$ 32,000 .....			
Over \$ 38,000 but not over \$ 44,000 .....				\$ 18,360, plus 69% of excess over \$ 38,000 .....			
Over \$ 44,000 but not over \$ 50,000 .....				\$ 22,500, plus 72% of excess over \$ 44,000 .....			
Over \$ 50,000 but not over \$ 60,000 .....				\$ 26,820, plus 75% of excess over \$ 50,000 .....			
Over \$ 60,000 but not over \$ 70,000 .....				\$ 34,320, plus 78% of excess over \$ 60,000 .....			
Over \$ 70,000 but not over \$ 80,000 .....				\$ 42,120, plus 81% of excess over \$ 70,000 .....			
Over \$ 80,000 but not over \$ 90,000 .....				\$ 50,220, plus 84% of excess over \$ 80,000 .....			
Over \$ 90,000 but not over \$100,000 .....				\$ 58,620, plus 87% of excess over \$ 90,000 .....			
Over \$100,000 but not over \$150,000 .....				\$ 67,320, plus 89% of excess over \$100,000 .....			
Over \$150,000 but not over \$200,000 .....				\$111,820, plus 90% of excess over \$150,000 .....			
Over \$200,000 .....				\$156,820, plus 91% of excess over \$200,000 .....			

\* The tax cannot in any event be more than 87% of taxable income.

Rate Table for Head of Household Returns

If your taxable income is:				Your tax is:			
Not over \$2,000				20% of the taxable income			
Over \$ 2,000 but not over \$ 4,000	\$ 400, plus 21% of excess over \$ 2,000			\$ 400, plus 21% of excess over \$ 2,000			
Over \$ 4,000 but not over \$ 6,000	\$ 820, plus 24% of excess over \$ 4,000			\$ 820, plus 24% of excess over \$ 4,000			
Over \$ 6,000 but not over \$ 8,000	\$ 1,300, plus 26% of excess over \$ 6,000			\$ 1,300, plus 26% of excess over \$ 6,000			
Over \$ 8,000 but not over \$ 10,000	\$ 1,820, plus 30% of excess over \$ 8,000			\$ 1,820, plus 30% of excess over \$ 8,000			
Over \$ 10,000 but not over \$ 12,000	\$ 2,420, plus 32% of excess over \$ 10,000			\$ 2,420, plus 32% of excess over \$ 10,000			
Over \$ 12,000 but not over \$ 14,000	\$ 3,060, plus 36% of excess over \$ 12,000			\$ 3,060, plus 36% of excess over \$ 12,000			
Over \$ 14,000 but not over \$ 16,000	\$ 3,780, plus 39% of excess over \$ 14,000			\$ 3,780, plus 39% of excess over \$ 14,000			
Over \$ 16,000 but not over \$ 18,000	\$ 4,560, plus 42% of excess over \$ 16,000			\$ 4,560, plus 42% of excess over \$ 16,000			
Over \$ 18,000 but not over \$ 20,000	\$ 5,400, plus 43% of excess over \$ 18,000			\$ 5,400, plus 43% of excess over \$ 18,000			
Over \$ 20,000 but not over \$ 22,000	\$ 6,260, plus 47% of excess over \$ 20,000			\$ 6,260, plus 47% of excess over \$ 20,000			
Over \$ 22,000 but not over \$ 24,000	\$ 7,200, plus 49% of excess over \$ 22,000			\$ 7,200, plus 49% of excess over \$ 22,000			

## Rate Table for Head of Household Returns (contd.)

Your combined taxable income is:		Your tax is:	
Over \$ 24,000 but not over \$ 28,000.....		\$ 8,180, plus 52% of excess over \$ 24,000	
Over \$ 28,000 but not over \$ 32,000.....		\$ 10,260, plus 54% of excess over \$ 28,000	
Over \$ 32,000 but not over \$ 38,000.....		\$ 12,420, plus 58% of excess over \$ 32,000	
Over \$ 38,000 but not over \$ 44,000.....		\$ 15,900, plus 62% of excess over \$ 38,000	
Over \$ 44,000 but not over \$ 50,000.....		\$ 19,620, plus 66% of excess over \$ 44,000	
Over \$ 50,000 but not over \$ 60,000.....		\$ 23,580, plus 68% of excess over \$ 50,000	
Over \$ 60,000 but not over \$ 70,000.....		\$ 30,380, plus 71% of excess over \$ 60,000	
Over \$ 70,000 but not over \$ 80,000.....		\$ 37,480, plus 74% of excess over \$ 70,000	
Over \$ 80,000 but not over \$ 90,000.....		\$ 44,880, plus 76% of excess over \$ 80,000	
Over \$ 90,000 but not over \$100,000.....		\$ 52,480, plus 80% of excess over \$ 90,000	
Over \$100,000 but not over \$150,000.....		\$ 60,480, plus 83% of excess over \$100,000	
Over \$150,000 but not over \$200,000.....		\$101,980, plus 87% of excess over \$150,000	
Over \$200,000 but not over \$300,000.....		\$145,480, plus 90% of excess over \$200,000*	
Over \$300,000.....		\$235,480, plus 91% of excess over \$300,000*	

\* The tax cannot in any event be more than 87% of taxable income.

## Rate Table for Joint Returns

Your combined taxable income is:		Your tax is:	
Not over \$4,000		20% of taxable income	
Over \$ 4,000 but not over \$ 8,000.....		\$ 800, plus 22% of excess over \$ 4,000	
Over \$ 8,000 but not over \$ 12,000.....		\$ 1,680, plus 26% of excess over \$ 8,000	
Over \$ 12,000 but not over \$ 16,000.....		\$ 2,720, plus 30% of excess over \$ 12,000	
Over \$ 16,000 but not over \$ 20,000.....		\$ 3,920, plus 34% of excess over \$ 16,000	
Over \$ 20,000 but not over \$ 24,000.....		\$ 5,280, plus 38% of excess over \$ 20,000	
Over \$ 24,000 but not over \$ 28,000.....		\$ 6,800, plus 43% of excess over \$ 24,000	
Over \$ 28,000 but not over \$ 32,000.....		\$ 8,520, plus 47% of excess over \$ 28,000	
Over \$ 32,000 but not over \$ 36,000.....		\$ 10,400, plus 50% of excess over \$ 32,000	
Over \$ 36,000 but not over \$ 40,000.....		\$ 12,400, plus 53% of excess over \$ 36,000	
Over \$ 40,000 but not over \$ 44,000.....		\$ 14,520, plus 56% of excess over \$ 40,000	
Over \$ 44,000 but not over \$ 52,000.....		\$ 16,760, plus 59% of excess over \$ 44,000	
Over \$ 52,000 but not over \$ 64,000.....		\$ 21,480, plus 62% of excess over \$ 52,000	
Over \$ 64,000 but not over \$ 76,000.....		\$ 28,920, plus 65% of excess over \$ 64,000	
Over \$ 76,000 but not over \$ 88,000.....		\$ 36,720, plus 69% of excess over \$ 76,000	
Over \$ 88,000 but not over \$100,000.....		\$ 45,000, plus 72% of excess over \$ 88,000	
Over \$100,000 but not over \$120,000.....		\$ 53,640, plus 75% of excess over \$100,000	
Over \$120,000 but not over \$140,000.....		\$ 68,640, plus 78% of excess over \$120,000	
Over \$140,000 but not over \$160,000.....		\$ 84,240, plus 81% of excess over \$140,000	
Over \$160,000 but not over \$180,000.....		\$100,440, plus 84% of excess over \$160,000	
Over \$180,000 but not over \$200,000.....		\$117,240, plus 87% of excess over \$180,000	
Over \$200,000 but not over \$300,000.....		\$134,640, plus 89% of excess over \$200,000*	
Over \$300,000 but not over \$400,000.....		\$223,640, plus 90% of excess over \$300,000*	
Over \$400,000.....		\$313,640, plus 91% of excess over \$400,000*	

\* The tax cannot in any event be more than 87% of combined taxable income.

## SOCIAL SECURITY

The Social Security Act was passed in 1935 and amended in 1939, 1950, 1952, 1954 and 1956. Of its 11 programs, 2 are insurance systems financed by payroll taxes: federal old-age and survivors' insurance and federal-state unemployment insurance. The other 9 provide federal grants-in-aid to the states for needy persons who are aged, blind, or permanently disabled, for dependent children, and for services in behalf of maternal health, child health, crippled children, child welfare, public health and vocational rehabilitation.

The administration of the Act is the responsibility of the Department of Health,

Education and Welfare. Within the Department, the Social Security Administration, headed by the Commissioner, conducts most of the program.

## Social Security Insurance Program

## WHO IS COVERED?

Almost everyone who works fairly regularly. Self-employed doctors are the only large group not covered by social security or some other government retirement program. A 65-year-old person who has never worked before can get old-age benefits by working for a year and a half. A younger person who pays social security tax for 10



years generally gets the full benefits provided under the program, even if he never works again. For example, a woman who worked for 10 years before her marriage could get an old-age benefit at 62 based on her own earnings. However, since the benefit would be based on her *average* earnings through all the years up to age 62, it might be a relatively small amount.

#### WHO PAYS FOR THE INSURANCE AND HOW MUCH?

Both workers and employers pay for the workers' insurance. Self-employed persons pay their own tax annually along with their income tax. Tax rates are scheduled to go up gradually until 1975:

Years	Workers and Employers Each to Pay	Self-Employed to Pay
1957-59.....	2¼%	3¼%
1960-64.....	2¾%	4¼%
1965-69.....	3¼%	4½%
1970-74.....	3¾%	5¾%
1975 and after.....	4¼%	6¾%

#### HOW TO APPLY FOR BENEFITS

You apply for benefits by filing a claim either in person or by mail at your nearest social security office. You can get the address either from the post office or from the phone book under the listing, United States Government—Department of Health, Education and Welfare—Social Security Administration. You will need certain kinds of proof, depending upon the type of benefit you are claiming. If it is an old-age benefit, you should have proof of age. A wife claiming old-age benefits based on her husband's earnings should have both proof of age and a copy of the marriage certificate. In the case of survivors' benefits, you will need a copy of the death certificate of the deceased worker. If formal proof is not available, the social security office will tell you what kinds of information will be acceptable.

#### WHAT DOES SOCIAL SECURITY OFFER YOU AND YOUR FAMILY?

The social security tax you pay gives you three different kinds of protection: (1) old age benefits, (2) survivors' benefits, and (3) disability benefits.

**Old-age benefits.** A man becomes eligible for an old-age benefit at age 65, if he has retired. Women can now collect as early as age 62. Widows get full old-age benefits at 62, but working women and wives of retired workers don't draw full benefits until age 65. A working woman retiring at 62 gets 80% of her full benefit for the rest of her life. The wife of a retired worker gets 75% of the wife's benefit at 62. She draws this amount for the rest of her life.

(But if her husband dies first, she start getting the full widow's benefit. These amounts are gradually stepped up the closer the woman is to age 65 when she first draws benefits.

The amount you would be entitled to an old-age benefit is the key to all other benefits under the program. The old-age benefit is usually based on average monthly earnings since 1950 (but earnings over \$400 a month are not counted). The tables in p. 749 gives examples of benefits.

Using the table as a guide, you will find that average monthly earnings of \$100 would give you a benefit of \$98.50 a month when you retire at 65. If your wife is 65 then, she will get a wife's benefit that is equal to half your basic benefit. So your benefit is \$98.50, your wife gets \$49.25 (cents are rounded out to the next dime).

If your wife is a few years younger than you (but not under 62), she can draw a slightly reduced benefit depending on her age. At 62, she will get about ¾ of your basic benefit, or \$37.

If you have children under 18 when you retire, they will each get a benefit equal to half your benefit, and so will your wife. In that case, even if she is under 62. However, total benefits based on your earnings cannot be more than \$200 a month or 80% of your average monthly wage.

A wife who is entitled to a worker's benefit based on her own earnings can draw whichever benefit—the worker's or her wife's—is larger. No one can draw two social security benefits at the same time.

**Survivors' benefits.** This feature of the social security program gives you valuable life insurance protection—in some cases over \$50,000 worth. The amount of protection is again geared to the benefit you would be entitled to at 65. If you can estimate from the table what your basic monthly benefit would be at 65, this tells what your survivors would get:

1. A cash payment to cover burial expenses. This comes to 3 times the basic monthly benefit, but no more than \$2,000.

2. A benefit for each child until he reaches 18. If there is only one child eligible, he gets 75% of the basic benefit. If there are two or more children, each gets 50% of the basic benefit and an additional 25% is split among them. (For 3 children, this would total 125% of the basic benefit.) A disabled child can continue to collect benefits after age 18. (See "Disability benefits" below.)

3. A benefit for your wife, if she has no children under 18 in her care. Her benefit is 75% of the basic benefit. She can collect this until the youngest child reaches 18. Payments stop then, but they start again when your wife reaches 62.

## What Benefits You Get Under Social Security

Based on an average monthly wage of	Retirement benefits			Survivors' benefits		
	Worker's monthly benefit <sup>1</sup>	Worker with 62-year-old wife	Worker with 65-year-old wife	Widow and 1 child	Widow and 2 children	Widow age 62 <sup>2</sup>
00.....	\$ 55.00	\$ 75.70	\$ 82.50	\$ 82.60	\$ 82.60	\$41.30
50.....	68.50	94.30	102.80	102.80	120.00	51.40
70.....	78.50	108.00	117.80	117.80	157.10	58.90
90.....	88.50	121.80	132.80	132.80	177.20	66.40
100.....	98.50	135.50	147.80	147.80	197.10	73.90
150.....	108.50	149.30	162.80	162.80	200.00	81.40

<sup>1</sup> Also indicates amount worker would get if disabled at age 50. <sup>2</sup> Also indicates amount that would be paid to fully child or parent.

Total family benefits cannot go over \$200 a month or 80% of your average monthly wage.

4. If there are no children under 18, your wife can get a widow's benefit starting at age 62. This would come to 75% of the basic benefit.

5. Dependent parents can sometimes collect survivors' benefits, if the deceased worker leaves no wife or child. They are usually eligible if: (a) they were getting at least half their support from the deceased worker when he died, (b) they have reached retirement age (65 for the father, 62 for the mother), and (c) they are not eligible for an old-age benefit based on their own earnings. Each parent would then get 75% of the basic benefit.

A woman worker can provide survivors' benefits for any of these dependents, if she has been contributing at least half their support: (1) her children under age 18, (2) her disabled child after 18, if the child is unmarried and was disabled before 18, and (3) her widowed husband at age 65, if he hasn't remarried. Or, if she had no other dependents, her parents could collect benefits if they met the tests in paragraph (5) above.

Here is an example of survivors' benefits in one family situation: John Jones dies, leaving a wife and two children aged one and three. His average monthly wage was \$300. This would have given him an old-age benefit of \$98.50, if he had lived to 65. This is what his family gets: (1) a cash burial payment of \$255; (2) a total monthly benefit of \$123.20 for the two children; and (3) a \$73.90 monthly benefit for Mrs. Jones. Total benefits for the family come to \$197.10 a month while the two children are under 18. When the older child reaches 18 his benefits stop, but the younger child's benefit is raised to \$73.90 a month. Mrs. Jones and the younger child then collect a total of \$147.80 a month for two years until the child reaches 18. Then all payments stop. When Mrs. Jones becomes 62 (assuming

she hasn't remarried), she will again be paid \$73.90 a month.

**Disability benefits.** These are a new feature of the social security insurance system. Disability benefits are paid to two groups of people:

1. A person who is permanently disabled can collect his full old-age benefit at age 50, instead of waiting until 65. However, no benefits will be paid to his dependents until he reaches 65. To be eligible for disability benefits, a person must: (a) have worked in employment (or self-employment) covered by social security for about 5 out of the 10 years before he became disabled; (b) be suffering from a physical or mental disability of indefinite duration; and (c) be so disabled that he can't work, or at least "engage in any substantial gainful activity." If he meets those tests, his benefits will start after a 6-month waiting period. Disability benefits will not usually be paid to anyone drawing any other Federal disability pay or workmen's compensation.

Many people who became permanently disabled in the past might be able to get benefits under this new program. They or members of their families should inquire about it at the nearest social security office.

2. The permanently disabled child of a deceased or retired person who was covered by social security can collect benefits after age 18 (when children's benefits are ordinarily cut off). If the child is eligible, his mother can also get a benefit. The child must: (a) have been disabled before age 18 (but he need not have been drawing benefits before 18), (b) be unmarried, and (c) have been dependent on the deceased or retired worker for at least half his support. The child's benefit would be 75% of the father's basic benefit and his mother would get the same amount. A disabled child can get a benefit based on his mother's earnings, instead of his father's, if she has contributed to at least half his support and has died or is drawing an old-age benefit.

The disabled child's benefit can actually be paid to adults, if the above tests are met. For example, an unmarried person, aged 40, who was born blind and is dependent on his father for support can collect a disabled child's benefit as soon as his father starts drawing an old-age benefit or dies.

### YOU CAN CONTINUE IN EMPLOYMENT AND EARN INCOME WITHOUT LOSING BENEFITS

If you are 72 or over, you can earn any amount. If you are under 72, you can earn \$1,200 a year without losing any benefits. (Only earned income is counted, not pensions, dividends, etc.) For each \$80 (or fraction of \$80) over \$1,200, you can lose one month's benefit. For example, \$1,290 could cancel two months' benefits, and \$2,081 could mean loss of the whole year's benefits. But you will not lose the benefit for any month in which you did not work as an employee for \$80 or more and did not perform substantial services in self-employment. For example, if you earned \$3,000 in 3 months and were idle the rest of the year, you would lose only 3 months' benefits.

When a man and wife are drawing old-age benefits based on his earnings, the wife will lose her benefit in any month that the husband loses his. But if a widow with young children loses her benefits by working, the children will continue to get theirs.

If you earn over \$1,200 a year while drawing benefits (and are under 72), you must report those earnings on Form OAC-777 to the Social Security Administration by April 15 of the following year.

### HOW TO PROTECT MY SOCIAL SECURITY ACCOUNT

There are 3 important steps you can take to be sure of the highest possible benefits based on your earnings:

1. *Always show your social security card when you start a new job.* In that way you will be sure that your earnings will be credited to your social security account and not someone else's. If you lose your social security card, apply for a new one. You can get an application blank at your local social security office, internal revenue office or post office. When a woman marries, she should apply for a new card showing her married name.

2. *Make a periodic check of earnings credited to your social security account.* You can do this by mailing postcard Form OAR-7004 to the Social Security Administration, Baltimore, Md. (You can get this form at any social security office.) The reply will show total wages credited to your account since 1936 or when you

started working. It's a good idea to check on this once every three years. If you've been out of work for a long time, it might be difficult to have errors corrected.

3. *If you should become permanently disabled, have your social security credits "frozen."* Social security benefits are usually based on your average earnings up to the date of death or retirement. A long period of sickness or disability could lower your average earnings and thus reduce or even eliminate the eventual benefit you or your family might get. But you can avoid this reduction in benefits by applying for a disability determination at your local social security office. Then the period of disability will not be counted when you (or your family) apply for benefits.

### PUBLIC ASSISTANCE

Aid to the needy is conducted jointly by the states and the Federal government. The federal contribution to the states for assistance to the needy aged, blind and disabled per month is: \$20 of the first \$25 and 50% of any amount between \$25 and \$100. The blind are permitted to earn up to \$100 a month and still get full assistance. For dependent children, the Federal government pays \$12 of the first \$15 and one-half the remainder up to \$30 per month. The child must be under 18 (or under 19 if still at school), without parental support or care and living with a member of the family.

### Unemployment Insurance

Unemployment insurance is managed jointly by the states and the national government. Most states began paying benefits in 1938 and 1939.

### UNDER WHAT CONDITIONS CAN THE WORKER COLLECT

The laws vary from state to state. In general, a waiting period of one week is required before collecting unemployment insurance; the worker must be able to work, must not have quit without good cause or have been discharged for misconduct; he must not be involved in a labor dispute; above all, he must be willing to take a job in his field at prevailing wage rates. Other restrictions on payments involve leaving for marriage, pregnancy, further education. Also, workers receive vacation or dismissal pay, workmen's compensation or veteran's allowances are usually considered ineligible.

The unemployed worker must go to his local state unemployment office to register his claim for unemployment benefits and must register for work. If a suitable opening is available in his field, he must accept it or lose his unemployment payment. If a worker moves out of his own state,



# State Unemployment Compensation Maximums

State	Weekly benefit	Duration (in weeks)	State	Weekly benefit	Duration (in weeks)
Alabama.....	\$25	20	Montana.....	\$26	20
Alaska.....	45	26*	Nebraska.....	28	20
Arizona.....	30	26	Nevada.....	30	26*
Kansas.....	26	18	New Hampshire.....	32	26
California.....	33	26	New Jersey.....	35	26
Colorado.....	28	20	New Mexico.....	30	24
Connecticut.....	35	26*	New York.....	36	26
Delaware.....	35	25	North Carolina.....	30	26
D.C.....	30	26*	North Dakota.....	26	20*
Florida.....	26	16	Ohio.....	33	26*
Georgia.....	30	20	Oklahoma.....	28	22
Hawaii.....	35	20	Oregon.....	35	26
Iaho.....	30	26	Pennsylvania.....	35	30
Illinois.....	28	26*	Rhode Island.....	30	26
Indiana.....	30	20	South Carolina.....	26	22
Iowa.....	30	24	South Dakota.....	25	20
Kansas.....	32	20	Tennessee.....	30	22
Kentucky.....	32	26	Texas.....	28	21
Louisiana.....	25	20	Utah.....	35	26
Maine.....	30	23	Vermont.....	28	26
Maryland.....	30	26*	Virginia.....	28	18
Massachusetts.....	35	26*	Washington.....	35	26
Michigan.....	30	26*	West Virginia.....	30	24
Minnesota.....	33	26	Wisconsin.....	36	26½
Mississippi.....	30	20	Wyoming.....	30	26*
Missouri.....	25	24			

\* This will be increased for unemployed persons with dependents.

an still collect at his new residence; the state where he is now located will act as agent for the other state, which pays his benefits.

## WHO PAYS FOR THE INSURANCE AND HOW MUCH?

The cost is borne by the employer in all but two states. Each state has a sliding scale of rates. The standard rate is set at 2.7% of taxable payroll in most states. But employers with records of steady employment (that is, few layoffs) are rewarded with rates lower than the standard 2.7%. The average rate for employers in 1955 was 1.18%. Tax is payable on only the first \$3,000 of a worker's pay, except in Alaska, Delaware, Nevada, Oregon and Rhode Island, where the limit is set at \$600. Employees as well as employers pay tax in Alabama and New Jersey: in Alabama, the employee pays from .1% to .6%; in New Jersey, the employee pays of 1%.

Employers pay an additional unemployment tax to the Federal government—3% of the first \$3,000 paid to each employee. The government returns this to the states to pay for the expenses of administering the unemployment laws.

## WHO IS COVERED AND WHO IS NOT?

Requirements vary from state to state,

but all states cover firms having at least 4 employees for 20 weeks or more a year. In some states, firms with only one employee are covered. Certain classes of workers are specifically exempt under some or all state laws: farm workers, domestic workers, members of the employer's family, insurance agents, workers in nonprofit organizations, student nurses, internes and casual labor.

## Railroad Workers

These are covered by the Railroad Retirement Act, passed in 1935 and amended in 1937 and 1946. The social security provisions of this act are administered by the Railroad Retirement Board. It is paid for by taxing both employer and employee. The present rate is 6¼%.

It provides retirement benefits at 65 or over (in some cases at 60), dependents' and survivors' benefits and disability allowances.

The Board also administers the Railroad Insurance Act, which provides unemployment insurance, sickness compensation and maternity benefits. The present costs are paid by the employer at ½% on wages up to \$350 a month. If benefits are increased, the rate may go from ½% to as high as 3%. These workers cannot collect benefits.

# THE UNITED NATIONS



## Its Major Cases and Actions

### IRAN

Iran presented the first case before the Security Council on Jan. 19, 1946, demanding an end to Russian "interference" in Azerbaijan province, which Russia had brought under its control through a puppet government. Iran also demanded that Russia keep her promise to withdraw all occupation troops by Mar. 2. The Council kept the matter on the agenda. Russia withdrew her troops May 6.

### GREECE

On Dec. 3, 1946, Greece complained to the Security Council that Communist-led rebels in northern Greece were being aided by Albania, Bulgaria and Yugoslavia. The Council named an investigating committee, which reported May 23, 1947, that those 3 nations were guilty. A Russian veto of July 29 prevented the Council's acceptance of the report. In Sept. 1948, the U. N. Balkan Commission, which continued to watch developments, again condemned the 3 nations for continuing aid to the Greek rebels. However, 3 months previously, on June 28, 1948, Marshal Tito's Yugoslavia had broken with Moscow. Thereafter, the Greek Communist-led rebellion faded out.

### ATOMIC ENERGY CONTROL

On Dec. 31, 1946, a U. N. commission of 11 nations recommended the "Baruch plan" sponsored by the U. S. for international control and inspection. Only Russia dissented. In June 1947, she submitted a vastly different control plan, limiting international inspection so greatly that the secret making of atomic bombs could not be discovered. On May 17, 1948, the U. N. commission voted (9-2) to suspend work on international atomic control, blaming Russia for the deadlock. A Russian veto of June 22 prevented the Security Council from approving the majority-approved control plan. The topic then went to the General Assembly, which, on Nov. 4, 1948, adopted (40-6) the U. S.-sponsored plan; but nothing could be done to put it into effect because of Soviet-bloc opposition.

### PALESTINE

A General Assembly special session met Apr. 28, 1947, at the request of Great Britain to consider Palestine. An 11-nation investigating committee recommended Aug. 31 that Britain give up control and that an Arab and a Jewish state be established. This partition plan was approved by the

Assembly in Nov. 1947, but proved impossible to enforce.

Britain ceased to govern Palestine May 14, 1948. Israel proclaimed her independence and was attacked by 5 neighboring Arab nations. The U. N. made 6 appeals to both sides to stop the war; the result brought about a truce from June 11 to July 9. Intermittent fighting took place thereafter. Count Folke Bernadotte, U. N. mediator, was murdered Sept. 29 near Jerusalem. He was succeeded by Ralph J. Bunche.

Israel signed an armistice with Egypt Feb. 24, 1949, and with Jordan on Apr. 3. On May 11, the U. N. voted (37-12) to admit Israel as the 59th member.

### INDONESIA

On July 30, 1947, Australia called the Security Council's attention to the fight between the Netherlands and the Indonesian Republic. The Council, on Aug. 17, ordered both sides to cease hostilities. A Good Offices Commission was sent to Indonesia, and it effected a truce Jan. 17, 1948. In Dec. 1948, the Dutch attacked Jakarta, then the Indonesian capital, and the Council again issued a cease-fire order. Dutch troops were withdrawn from around Jakarta in July 1949. Indonesia thereafter peacefully achieved independence from the Netherlands.

### ITALIAN COLONIES

On Sept. 15, 1948, after 3 years of argument, the Big 4 failed to agree on the disposition of the colonies which the 1947 treaty required Italy to give up. So, by clause in the treaty, the question was referred to the General Assembly for settlement. The Assembly decided Nov. 21, 1948, that Libya should become independent Jan. 1, 1952, and that Somaliland should be a U. N. trusteeship under Italian administration for 10 years, after which it would be independent. Eritrea was federated with Ethiopia.

### INDIA-PAKISTAN

On Jan. 2, 1948, India appealed to the U. N. to stop alleged aggression by Pakistan. Fighting had broken out over what nation should control the province of Kashmir. The Security Council sent a commission, which proposed that Kashmir's future be determined by a plebiscite. The Council agreed on Apr. 21, but both sides raised objections. Early in 1949, the U. N. commission succeeded in obtaining

truce; and, on Mar. 14, 1950, the Council substituted a mediator, who was to seek demilitarization of the areas of Kashmir held by India and Pakistan and to try for a plebiscite. Two mediators failed.

## RUSSIAN BOYCOTT

Soviet Delegate Malik walked out of the Security Council on Jan. 13, 1950, because it had refused (6-3) Russia's demand that Nationalist China be replaced in the U. N. by Communist China. The boycott ended on Aug. 1. Again the Council voted (8-3) to refuse membership to Communist China.

## KOREA

Russia occupied the northern half of Korea after World War II, and the U. S.

occupied the southern half below the 38th parallel. The understanding was that the occupying powers would set up an independent republic to govern the entire country. Russia refused to co-operate. The U. S. then referred the problem to the U. N., and the General Assembly voted Nov. 5, 1947, to send a commission to Korea to set up a free government. Russia, however, boycotted the commission and refused to allow it to enter North Korea. The commission therefore supervised free elections in South Korea and assisted in setting up the Republic of Korea with its capital at Seoul.

(For events after the warfare began in Korea, see Headline History of Our Times.)

## The 76 Members of the United Nations, Oct. 1956

Country	Signed U. N. Decla- ration <sup>1</sup>	Joined U. N. Organi- zation <sup>2</sup>	League of Nations <sup>3</sup>	Country	Signed U. N. Decla- ration <sup>1</sup>	Joined U. N. Organi- zation <sup>2</sup>	League of Nations <sup>3</sup>
Afghanistan.....	....	1946	1934-46	Ireland.....	....	1955	1923-46
Albania.....	....	1955	1920-46	Israel.....	....	1949	....
Argentina.....	1945	1945	1919-46	Italy.....	....	1955	1920-39
Australia.....	1942	1945	1920-46	Jordan.....	....	1955	....
Austria.....	....	1955	1920-40	Laos.....	....	1955	....
Belgium.....	1942	1945	1920-46	Lebanon.....	1945	1945	....
Bolivia.....	1943	1945	1920-46	Liberia.....	1944	1945	1920-46
Brazil.....	1943	1945	1920-28	Libya.....	....	1955	....
Bulgaria.....	....	1955	1920-46	Luxembourg.....	1942	1945	1920-46
Burma.....	....	1948	....	Mexico.....	1942	1945	1931-46
Byelorussian S.S.R. <sup>4</sup>	....	1945	....	Nepal.....	....	1955	....
Cambodia.....	....	1955	....	Netherlands.....	1942	1945	1920-46
Canada.....	1942	1945	1920-46	New Zealand.....	1942	1945	1920-46
Ceylon.....	....	1955	....	Nicaragua.....	1942	1945	1920-38
Chile.....	1945	1945	1919-40	Norway.....	1942	1945	1920-46
China.....	1942	1945	1920-46	Pakistan.....	....	1947	....
Colombia.....	1944	1945	1920-46	Panamá.....	1942	1945	1920-46
Costa Rica.....	1942	1945	1920-26	Paraguay.....	1945	1945	1920-37
Cuba.....	1942	1945	1920-46	Peru.....	1945	1945	1920-41
Czechoslovakia.....	1942	1945	1920-46	Philippines.....	1942	1945	....
Denmark <sup>5</sup> .....	....	1945	1920-46	Poland <sup>6</sup> .....	1942	1945	1920-46
Dominican Republic.....	1942	1945	1924-46	Portugal.....	....	1955	1920-46
Ecuador.....	1945	1945	1934-46	Rumania.....	....	1955	1920-42
Egypt.....	1945	1945	1937-46	Saudi Arabia.....	1945	1945	....
El Salvador.....	1942	1945	1920-39	South Africa, U. of.....	1942	1945	1920-46
Ethiopia.....	1943	1945	1923-46	Spain.....	....	1955	1920-41
Finland.....	....	1955	1920-46	Sweden.....	....	1946	1920-46
France.....	1945	1945	1920-46	Syria.....	1945	1945	....
Germany.....	1942	1945	1920-46	Thailand.....	....	1946	1920-46
Guatemala.....	1942	1945	1920-38	Turkey.....	1945	1945	1932-46
Haiti.....	1942	1945	1920-44	Ukrainian S.S.R. <sup>4</sup>	....	1945	....
Honduras.....	1942	1945	1920-38	United Kingdom.....	1942	1945	1920-46
Hungary.....	....	1955	1922-41	United States.....	1942	1945	....
Iceland.....	....	1946	....	U.S.S.R.....	1942	1945	1934-39
India.....	1942	1945	1920-46	Uruguay.....	1945	1945	1920-46
Indonesia.....	....	1950	....	Venezuela.....	1945	1945	1920-40
Iran.....	1943	1945	1919-46	Yemen.....	....	1947	....
Iraq.....	1943	1945	1932-46	Yugoslavia.....	1942	1945	1920-46

<sup>1</sup> Declaration of United Nations was originally signed by 26 nations in Washington, D. C., on Jan. 1, 1942. <sup>2</sup> U. N. actually came into existence Oct. 24, 1945. <sup>3</sup> League was formally dissolved Apr. 18, 1946. Nations withdrawing before that time did so voluntarily, except U.S.S.R., which was expelled. Other members of League were: Estonia (1921-46), Germany (1926-35), Japan (1920-35), Latvia (1921-46), Lithuania (1921-46), Switzerland (1920-46). <sup>4</sup> Admission as separate nation approved at San Francisco Conference. <sup>5</sup> Invited to attend San Francisco Conference in June 1945, after its liberation. <sup>6</sup> Not represented at San Francisco Conference, but subsequently signed Charter as original member.



## Principal Organs of the United Nations

(For functions, see Charter beginning on page 759)

### SECRETARIAT

#### Secretary-General

Dag Hammarskjöld, of Sweden, Apr. 10, 1953, to the present.

#### Former Secretary-General

Trygve Lie, of Norway, Feb. 1, 1946, to Apr. 10, 1953.

#### Principal Officers

Andrew W. Cordier, Executive Assistant to the Secretary-General.

Constantin Stavropoulos, Legal Counsel.

Bruce R. Turner, Controller.

J. A. C. Robertson, Director of Personnel.

Ralph J. Bunche, Undersecretary.\*

Ilya S. Tchernychev, Undersecretary.\*

Dragoslav Protitch, Undersecretary, Dept. of Political and Security Council Affairs.

Philippe de Seynes, Undersecretary, Dept. of Economic and Social Affairs.

Martin Hill, Deputy Undersecretary, Dept. of Economic and Social Affairs.

Benjamin Cohen, Undersecretary, Dept. of Trusteeship and Information from Non-Self-Governing Territories.

Ahmed S. Bokhari, Undersecretary, Dept. of Public Information.

Alfred G. Katzin, Deputy Undersecretary, Dept. of Public Information.

Victor Hoo, Undersecretary, Dept. of Conference Services.

David V. Vaughan, Director, Office of General Services.

Hugh L. Keenleyside, Director General, Technical Assistance Administration.

Gustavo Martínez Cabañas, Deputy Director General, Technical Assistance Administration.

Maurice Pate, Executive Director, U. N. Children's Fund (UNICEF).

David Owen, Executive Chairman, Technical Assistance Board.

\* Duties not confined to a single department.

### GENERAL ASSEMBLY

The General Assembly is composed of all member states. It does most of its work in committees, of which there are 4 types: main, procedural, standing and ad hoc.

#### Main Committees

First Committee (Political and Security, including the regulation of armaments).  
Second Committee (Economic and Financial).

Third Committee (Social, Humanitarian and Cultural).

Fourth Committee (Trusteeship, including Non-Self-Governing Territories).

Fifth Committee (Administrative and Budgetary).

Sixth Committee (Legal).

### Presidents of the General Assembly\*

Paul-Henri Spaak, of Belgium, 1946, First Session.

Oswaldo Aranha, of Brazil, 1947, First Special Session and Second Regular Session.

Dr. José Arce, of Argentina, 1948, Second Special Session.

Herbert V. Evatt, of Australia, 1948, Third Session.

Carlos P. Romulo, of The Philippines, 1949, Fourth Session.

Nasrollah Entezam, of Iran, 1950, Fifth Session.

Luis Padilla Nervo, of Mexico, 1951, Sixth Session.

Lester B. Pearson, of Canada, 1952, Seventh Session.

Mrs. Vijaya Lakshmi Pandit, of India, 1953, Eighth Session.

Elco N. van Kleffens, of the Netherlands, 1954, Ninth Session.

José Maza, of Chile, 1955, Tenth Session.

\* The President of the 11th session had not been elected when this book went to press.

### SECURITY COUNCIL

The Security Council is composed of permanent members—China, France, Great Britain, U.S.S.R., the United Kingdom and the United States. There are 6 nonpermanent members serving 2-year terms.

#### Representatives (as of Sept. 1956)\*

Australia: Dr. E. Ronald Walker.

Belgium: Fernand van Langenhove.

China: Dr. Tingfu F. Tsiang.

Cuba: Dr. Emilio Núñez-Portuondo.

France: Bernard Cornut-Gentille.

Iran: Nasrollah Entezam.

Peru: Dr. Victor A. Belaúnde.

U.S.S.R.: Arkadi A. Sobolev.

United Kingdom: Sir Pierson Dixon.

United States: Henry Cabot Lodge, Jr.

Yugoslavia: Dr. Joza Brilej.

The Military Staff Committee is composed of the Chiefs of Staff of the 5 permanent members or their representatives. The Disarmament Commission, established by the General Assembly under the Security Council, has the same membership as the Council, plus Canada when not a member of the Council.

\* 3 new nonpermanent members to be elected by the General Assembly during its 11th session to replace Belgium, Iran and Peru.

### ECONOMIC AND SOCIAL COUNCIL

The Economic and Social Council is composed of 18 nonpermanent members serving 3-year terms.

**Representatives (as of July–Aug. 1956)\***

Argentina: R. Adm. Aníbal O. Olivieri.  
 Brazil: Cyro de Freitas-Valle.  
 Canada: Lucien Cardin.  
 China: Cheng Paonan.  
 Czechoslovakia: Jiří Nosek.  
 Dominican Republic: Dr. Enrique de Mar-  
 chena.  
 Ecuador: Dr. José Vicente Trujillo.  
 Egypt: Omar Loutfi.  
 France: Pierre Abelin.  
 Greece: Anthony Poupouras.  
 Indonesia: Dr. A. R. Asmaun.  
 Netherlands: D. U. Stikker.  
 Norway: Hans Engen.  
 Pakistan: Said Hasan.  
 U.S.S.R.: A. V. Zakharov.  
 United Kingdom: Lord John Hope.  
 United States: John C. Baker.  
 Yugoslavia: Dr. Joža Brilej.

\* 2 new nonpermanent members to be elected by General Assembly to replace Czechoslovakia, Ecuador, Norway, Pakistan, U.S.S.R. and U. K.

**Functional Commissions**

Transport and Communications Commission.  
 Statistical Commission.  
 Population Commission.  
 Social Commission.  
 Commission on Human Rights.  
 Commission on the Status of Women.  
 Commission on Narcotic Drugs.  
 Commission on International Commodity Trade.

**Regional Economic Commissions**

Economic Commission for Europe.  
 Economic Commission for Asia and the Far East.  
 Economic Commission for Latin America.

**TRUSTEESHIP COUNCIL**

The Trusteeship Council is composed of permanent members—Australia, Belgium, France, Italy, New Zealand, the United Kingdom and the U. S., which administer trust territories; and China and the U.S.S.R., which do not administer trust territories. There are also 5 nonpermanent members serving 3-year terms.

**Representatives (as of June–Aug. 1956)\***

Australia: Dr. E. Ronald Walker.  
 Belgium: Alfred Claeys Bouuaert.  
 China: U Mya Sein.  
 France: Chipping H. C. Kiang.  
 Greece: Robert Barges.  
 Guatemala: Emilio Arenales Catalán.  
 Italy: Max H. Dorsinville.  
 Japan: V. K. Khrishna Menon.  
 Norway: Remigio Grillo.  
 New Zealand: Sir Leslie Knox Munro.  
 U.S.S.R.: Rafik Asha.

U.S.S.R.: Vasily F. Grubyakov.  
 United Kingdom: Sir Alan Cuthbert Burns.  
 United States: Mason Sears.

\* 2 nonpermanent members to be elected by General Assembly to replace Haiti and India; they are eligible for re-election.

The Trusteeship Agreements concern the following territories (the Administering Authority in each case is in italics):

Nauru—*Australia (on behalf of Australia, New Zealand and the United Kingdom).*  
 New Guinea—*Australia.*  
 Ruanda-Urundi—*Belgium.*  
 Cameroons } *France.*  
 Togoland }  
 Somaliland—*Italy.*  
 Western Samoa—*New Zealand.*  
 Cameroons }  
 Togoland } *United Kingdom.*  
 Tanganyika }

The Territory of the Pacific Islands—composed of the former Japanese-mandated islands of the Marshalls, Marianas (with the exception of Guam) and Carolines—is a strategic Trust Territory administered by the U. S.

The General Assembly decided at its Fourth Session in 1949 that former Italian Somaliland was to be placed under the Trusteeship System for 10 years, at the end of which time it would become independent. Italy became the Administering Authority on Apr. 1, 1950.

**United Nations Headquarters**

The first regular session of the General Assembly held at Central Hall, Westminster, London, voted that Interim Headquarters of the Organization should be located in New York. In August 1946, an Interim Headquarters was set up at Lake Success on Long Island, in a part of the Sperry Gyroscope Co.'s plant. The New York City building at Flushing Meadow, site of the 1939 World's Fair, was converted for the use of the General Assembly. The search for a permanent home ended in December 1946, when the General Assembly accepted an offer from John D. Rockefeller, Jr., of \$8,500,000 for the purchase of the present Headquarters site—an 18-acre tract alongside Manhattan's East River. The United States Government loaned the United Nations \$65,000,000 interest free, which is being repaid in annual installments.

Architectural plans drawn up by an international Board of Design were approved by the Assembly, and construction began in September 1948. By mid-1950, the 39-story Secretariat Building was ready for occupancy, and in the spring of 1951 "United Nations, New York" became the Organization's permanent address.

## Elected Member States Serving Terms on U. N. Councils

(For permanent members, see pages 754-55)

### Security Council

- Jan. 1946-Dec. 1946: Egypt; Mexico; Netherlands.  
 Jan. 1946-Dec. 1947: Australia; Brazil; Poland.  
 Jan. 1947-Dec. 1948: Belgium; Colombia; Syria.  
 Jan. 1948-Dec. 1949: Argentina; Canada; Ukrainian S.S.R.  
 Jan. 1949-Dec. 1950: Cuba; Egypt; Norway.  
 Jan. 1950-Dec. 1951: Ecuador; India; Yugoslavia.  
 Jan. 1951-Dec. 1952: Brazil; Netherlands; Turkey.  
 Jan. 1952-Dec. 1953: Chile; Greece; Pakistan.  
 Jan. 1953-Dec. 1954: Colombia; Denmark; Lebanon.  
 Jan. 1954-Dec. 1955: Brazil; New Zealand; Turkey.  
 Jan. 1955-Dec. 1956: Belgium, Iran, Peru.  
 Jan. 1956-Dec. 1957: Australia; Cuba; Yugoslavia.

### Economic and Social Council

- Jan. 1946-Dec. 1946: Colombia; Greece; Lebanon; Ukrainian S.S.R.; U. S.; Yugoslavia.  
 Jan. 1946-Dec. 1947: Cuba; Czechoslovakia; India; Norway; United Kingdom; U.S.S.R.  
 Jan. 1946-Dec. 1948: Belgium (resigned 1947 and replaced by Netherlands); Canada; Chile; China; France; Peru.  
 Jan. 1947-Dec. 1949: Byelorussian S.S.R.; Lebanon; New Zealand; Turkey; U. S.; Venezuela.

- Jan. 1948-Dec. 1950: Australia; Brazil; Denmark; Poland; United Kingdom; U.S.S.R.  
 Jan. 1949-Dec. 1951: Belgium; Chile; China; France; India; Peru.  
 Jan. 1950-Dec. 1952: Canada; Czechoslovakia; Iran; Mexico; Pakistan; U. S.  
 Jan. 1951-Dec. 1953: Philippines; Poland; Sweden; United Kingdom; Uruguay; U.S.S.R.  
 Jan. 1952-Dec. 1954: Argentina; Belgium; China; Cuba; Egypt; France.  
 Jan. 1953-Dec. 1955: Australia; India; Turkey; U. S.; Venezuela; Yugoslavia.  
 Jan. 1954-Dec. 1956: Czechoslovakia; Ecuador; Norway; Pakistan; United Kingdom; U.S.S.R.  
 Jan. 1955-Dec. 1957: Argentina; China; Dominican Rep.; Egypt; France; Netherlands.  
 Jan. 1956-Dec. 1958: Brazil; Canada; Greece; Indonesia; U. S.; Yugoslavia.

### Trusteeship Council

- Jan. 1947-Dec. 1949: Iraq; Mexico.  
 Jan. 1948-Dec. 1950: Costa Rica (resigned 1948 and replaced by Dominican Republic); Philippines.  
 Jan. 1950-Dec. 1952: Argentina (resigned 1948 and replaced by El Salvador); Iraq.  
 Jan. 1951-Dec. 1953: Dominican Republic; Thailand.  
 Jan. 1953-Dec. 1955: El Salvador; Syria.  
 Jan. 1954-Dec. 1956: Haiti; India.  
 Jan. 1956-Dec. 1958: Burma; Guatemala; Syria.

## Specialized Agencies of the United Nations

### Food and Agriculture Organization of the United Nations (FAO)

*Established:* Oct. 16, 1945, when constitution was signed in Quebec.

*Purposes:* To raise nutrition levels and living standards; to secure improvements in production and distribution of food and agricultural products.

*Headquarters:* Viale delle Terme Di Caracalla, Rome, Italy.

### Inter-Governmental Maritime Consultative Organization (IMCO)

*Established:* Will come into existence when 21 nations, of which 7 must each have a total tonnage of at least one million gross tons of shipping, have become parties to convention drawn up by U. N. Maritime Conference at Geneva, Feb. 19 to Mar. 6, 1948. (Preparatory Committee established by Conference will cease to exist after IMCO comes into being.)

*Purposes:* To promote co-operation among governments in technical problems of international shipping and to encourage removal of discriminatory action by governments and of unfair restrictive practices by shipping concerns.

*Headquarters:* To be in London.

### International Bank for Reconstruction and Development (Bank)

*Established:* Dec. 27, 1945, when 28 nations signed Articles of Agreement drawn up at Bretton Woods Conference in July 1944.

*Purposes:* To assist in reconstruction and development of economies of members making loans directly and promoting private foreign investment; to promote advanced growth of international trade.

*Headquarters:* 1818 H St., NW, Washington 25, D. C.

### International Civil Aviation Organization (ICAO)

*Established:* Apr. 4, 1947, 30 days after 26th nation ratified Convention on International Civil Aviation adopted Dec. 7, 1944, by Chicago International Civil Aviation Conference.

*Purposes:* To study problems of international civil aviation and establish international standards and regulations.

*Headquarters:* International Aviation Bldg., Montreal, Canada.

### International Labour Organisation (ILO)

*Established:* Apr. 11, 1919, when con-



tion was adopted as Part XIII of Treaty of Versailles.

**Purposes:** To contribute to establishment of lasting peace by promoting social justice; to improve, through international action, labor conditions and living standards; to promote economic and social stability.

**Headquarters:** Geneva, Switzerland.

**International Monetary Fund (Fund)**

**Established:** Dec. 27, 1945, when nations whose quotas amounted to 80% of Fund's resources had signed Articles of Agreement drawn up at Bretton Woods.

**Purposes:** To promote international monetary co-operation and expansion of international trade; to promote exchange stability; to assist in establishment of multilateral system of payments in respect of current transactions between members.

**Headquarters:** 1818 H St., NW, Washington 25, D. C.

**International Telecommunication Union (ITU)**

**Established:** Jan. 1, 1934, when International Telecommunication Convention adopted on Dec. 9, 1932, at Madrid Conference became effective.

**Purposes:** To maintain and extend international co-operation for improvement and rational use of all kinds of telecommunication and to promote development and most efficient operation of technical facilities.

**Headquarters:** Palais Wilson, Geneva, Switzerland.

**International Trade Organization (ITO)**

**Established:** Will come into existence when sufficient number of countries have ratified Havana Charter drawn up by U. N. Conference on Trade and Employment at Havana, Cuba, Nov. 21, 1947, to Mar. 24, 1948. (Interim Commission established by Conference will cease to exist after ITO comes into being.)

**Purposes:** To promote expansion of world trade and removal of trade barriers.

**United Nations Educational, Scientific and Cultural Organization (UNESCO)**

**Established:** Nov. 4, 1946, when 20th

signatory to constitution deposited instrument of acceptance with government of United Kingdom.

**Purposes:** To promote collaboration among nations through education, science and culture in order to further justice, rule of law and human rights and freedoms without distinction of race, sex, language or religion.

**Headquarters:** 19 Ave. Kléber, Paris, 16, France.

**Universal Postal Union (UPU)**

**Established:** Oct. 9, 1874, by Postal Convention of Bern, Switzerland, effective July 1, 1875.

**Purposes:** To assure organization and perfecting of various postal services and to promote development of international collaboration. To this end, member countries are united in single postal territory for reciprocal exchange of mail.

**Headquarters:** Schosshaldenstrasse 46, Bern, Switzerland.

**World Health Organization (WHO)**

**Established:** Apr. 7, 1948, when 26 members of the United Nations had accepted its constitution adopted July 22, 1946, by International Health Conference in New York City.

**Purposes:** To aid attainment by all peoples of the world of highest possible level of health.

**Headquarters:** Palais des Nations, Geneva, Switzerland.

**World Meteorological Organization (WMO)**

**Established:** Mar. 23, 1950, 30 days after deposit with government of U. S. of 30th instrument of ratification of or accession to convention adopted in Washington, D. C., Oct. 11, 1947, by twelfth Conference of Directors of International Meteorological Organization (IMO).

**Purposes:** To facilitate world-wide co-operation and promote standardization in making of meteorological observations; to further application of meteorology to various human activities.

**Headquarters:** Avenue de la Paix, Campagne Rigot, Geneva, Switzerland.

## Judges of the International Court of Justice

(Judges serve for a 9-year term and may be re-elected. Expiration dates of terms are shown in parentheses. The seat of the Court is The Hague, Netherlands.)

**President:** Green H. Hackworth, U. S. (1961)

**Vice President:** Abdel Hamid Badawi, Egypt (1958)

**C. C. Armand-Ugón, Uruguay (1961)**

**Raoul Berthod, France (1964)**

**Roberto Córdova, Mexico (1964)**

**José Gustavo Guerrero, El Salvador (1964)**

**Mohammad Zafrulla Khan, Pakistan (1961)**

**Helge Klaestad, Norway (1961)**

**I. I. Kojenkov, U.S.S.R. (1961)**

**Hersch Lauterpacht, U. K. (1964)**

**Hsu Mo, China (1958)\***

**L. M. Moreno Quintana, Argentina (1964)**

**John E. Read, Canada (1958)**

**Bohdan Winarski, Poland (1958)**

**Milovan Zoričić, Yugoslavia (1958)**

\* Died 1956. To be replaced by General Assembly.

## Delegation Heads to the United Nations

### Members Represented at Headquarters\*

Afghanistan: Abdul Hamid Aziz.  
 Albania: Reis Malile.  
 Argentina: R. Adm. Anibal Osvaldo Olivieri.  
 Australia: Dr. E. Ronald Walker.  
 Austria: Dr. Franz Matsch.  
 Belgium: Fernand van Langenhove.  
 Bolivia: Dr. German Quiroga-Galdo.  
 Brazil: Cyro de Freitas-Valle.  
 Bulgaria: Dr. Peter G. Voutov.  
 Burma: U Wln.  
 Cambodia: (Vacant).  
 Canada: Dr. R. A. Mackay.  
 Ceylon: R. S. S. Gunewardene.  
 Chile: Rudecindo Ortega.  
 China: Dr. Tingfu F. Tsiang.  
 Colombia: Dr. Francisco Urrutia.  
 Costa Rica: Dr. Alberto F. Canas.  
 Cuba: Dr. Emilio Nuñez-Portuondo.  
 Czechoslovakia: Josef Ullrich.  
 Denmark: Karl I. Eskelund.  
 Dominican Rep.: Dr. Enrique de Marchena.  
 Ecuador: Dr. Jose Vicente Trujillo.  
 Egypt: Omar Loutfi.  
 El Salvador: Dr. Migual Rafael Urquía.  
 Ethiopia: Ato Zaudef Heywot.  
 Finland: George de Gripenberg.  
 France: Bernard Cornut-Gentille.  
 Greece: Christian X. Palamas.  
 Guatemala: Emilio Arenales Catalan.  
 Haiti: Jacques N. Leger.  
 Honduras: Dr. Riburcio Carías, Jr.  
 Hungary: Dr. Peter Kos.  
 Iceland: Thor Thors.  
 India: Arthur S. Lall.  
 Indonesia: Dr. Sudjarwo Tjondronegoro.  
 Iran: Dr. Djalal Abdoh.

Iraq: Abdul Karim Gallani.  
 Ireland: Frederick H. Boland.  
 Israel: Abba Eban.  
 Italy: Dr. Leonardo Vitetti.  
 Jordan: Abdul Monem Rifa'i.  
 Laos: Ourret R. Souvannavong.  
 Lebanon: Edward Rizk.  
 Liberia: Charles T. O. King.  
 Mexico: Rafael de la Colina.  
 Netherlands: C. W. A. Schurmann.  
 New Zealand: Sir Leslie Munro.  
 Nicaragua: Dr. Guillermo Sevilla-Sacasa.  
 Norway: Hans Engen.  
 Pakistan: Mohammad Mir Khan.  
 Panama: Roberto de la Guardia.  
 Paraguay: Dr. Pacifico Montero de Vargas.  
 Peru: Carlos Holguin.  
 Philippines: Felixberto M. Serrano.  
 Poland: Jerzy Michalowski.  
 Portugal: Dr. Vasco Vieira Garin.  
 Rumania: Athanase Joja.  
 Saudi Arabia: Sheikh Abdullah Al-Kharyy.  
 Spain: Don Jose Felix de Lequerica.  
 Sweden: Gunnar V. Jarring.  
 Syria: Rafik Asha.  
 Thailand: Prince Wan Waithayakon.  
 Turkey: Selim Sarper.  
 Union of S. A.: Wentzel Christoffel Plessis.  
 U.S.S.R.: Arkady A. Sobolev.  
 United Kingdom: Sir Pierson Dixon.  
 United States: Henry Cabot Lodge, Jr.  
 Uruguay: Prof. Enrique Rodriguez Fabrega.  
 Venezuela: Dr. Santiago Perez-Perez.  
 Yemen: Mohamed Kamil Abdul Rahim.  
 Yugoslavia: Dr. Joza Brilej.

\* Permanent representatives to U. N. as of Sept. 1956. Not all nations maintain permanent missions.

### U. S. Permanent Mission to U. N.

Henry Cabot Lodge, Jr.; Ambassador Extraordinary and Plenipotentiary, Permanent Representative to U. N.  
 James J. Wadsworth; Ambassador Extraordinary and Plenipotentiary, Deputy Representative to U. N.  
 James F. Barco; Minister, Deputy Representative on Security Council, Counsellor of Mission.  
 Mason Sears; Representative on Trusteeship Council.  
 John C. Baker; Representative on Economic and Social Council.  
 Nat B. King; Deputy Representative on Economic and Social Council.  
 Albert S. Watson; Executive Director.  
 Albert F. Bender, Jr.; Adviser, Legal and International Organization Affairs.

### U. S. Delegation to the 11th Session of the General Assembly (starting November 1956)

The Secretary of State, John Foster Dulles, will serve as Senior Representative ex officio during his presence at the session.

#### Representatives

Wm. F. Knowland	Paul G. Hoffman
Hubert H. Humphrey	Ellsworth Bunker
Henry C. Lodge, Jr.	

#### Alternate Representatives

James J. Wadsworth	Edward S. Greenbaum
Richard Lee Jones	Mrs. Oswald B. Loring
Frank C. Nash	

### United Nations Costs

The estimated regular U. N. budget for 1956 was \$48,566,350. Member states contribute on a scale determined by the General Assembly. In 1956, the U. S. paid  $\frac{1}{3}$  of the cost, the U.S.S.R. paid 15.28% and the U. K. paid 8.55%.

### The U. N. Flag

The United Nations has its own flag which is light blue. In the center is the U. N. symbol, a polar map of the world embraced by olive branches, in white. The General Assembly adopted the flag on October 20, 1947.

## CHARTER OF THE UNITED NATIONS

**W**E the peoples of the United Nations determined to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and

To reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small, and

To establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and

To promote social progress and better standards of life in larger freedom, and for these ends

To practice tolerance and live together in peace with one another as good neighbors, and

To unite our strength to maintain international peace and security, and

To insure, by the acceptance of principles and the institution of methods, that armed force shall not be used, save in the common interest, and

To employ international machinery for the promotion of the economic and social advancement of all peoples, have resolved to combine our efforts to accomplish these aims.

Accordingly, our respective Governments, through representatives assembled in the city of San Francisco, who have exhibited their full powers found to be in good and due form, have agreed to the present Charter of the United Nations and do hereby establish an international organization to be known as the United Nations.

### CHAPTER I

#### Purposes and Principles

##### Article 1

The purposes of the United Nations are:

1. To maintain international peace and security, and to that end: to take effective collective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression or other breaches of the peace, and to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace;

2. To develop friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, and to take other appropriate measures to strengthen universal peace;

3. To achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian

character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion; and

4. To be a center for harmonizing the actions of nations in the attainment of these common ends.

##### Article 2

The Organization and its Members, in pursuit of the Purposes stated in Article 1, shall act in accordance with the following Principles:

1. The Organization is based on the principle of the sovereign equality of all its Members.

2. All Members, in order to ensure to all of them the rights and benefits resulting from membership, shall fulfill in good faith the obligations assumed by them in accordance with the present Charter.

3. All Members shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered.

4. All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations.

5. All Members shall give the United Nations every assistance in any action it takes in accordance with the present Charter, and shall refrain from giving assistance to any state against which the United Nations is taking preventive or enforcement action.

6. The Organization shall ensure that states which are not Members of the United Nations act in accordance with these Principles so far as may be necessary for the maintenance of international peace and security.

7. Nothing contained in the present Charter shall authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any state or shall require the Members to submit such matters to settlement under the present Charter; but this principle shall not prejudice the application of enforcement measures under Chapter VII.

### CHAPTER II

#### Membership

##### Article 3

The original Members of the United Nations shall be the states which, having participated in the United Nations Conference on International Organization at San Francisco, or having previously signed



the Declaration by United Nations of January 1, 1942, sign the present Charter and ratify it in accordance with Article 110.

### Article 4

1. Membership in the United Nations is open to all other peace-loving states which accept the obligations contained in the present Charter and, in the judgment of the Organization, are able and willing to carry out these obligations.

2. The admission of any such state to membership in the United Nations will be effected by a decision of the General Assembly upon the recommendation of the Security Council.

### Article 5

A Member of the United Nations against which preventive or enforcement action has been taken by the Security Council may be suspended from the exercise of the rights and privileges of membership by the General Assembly upon the recommendation of the Security Council. The exercise of these rights and privileges may be restored by the Security Council.

### Article 6

A Member of the United Nations which has persistently violated the Principles contained in the present Charter may be expelled from the Organization by the General Assembly upon the recommendation of the Security Council.

## CHAPTER III

### Organs

#### Article 7

1. There are established as the principal organs of the United Nations; a General Assembly, a Security Council, an Economic and Social Council, a Trusteeship Council, an International Court of Justice, and a Secretariat.

2. Such subsidiary organs as may be found necessary may be established in accordance with the present Charter.

#### Article 8

The United Nations shall place no restrictions on the eligibility of men and women to participate in any capacity and under conditions of equality in its principal and subsidiary organs.

## CHAPTER IV

### The General Assembly Composition

#### Article 9

1. The General Assembly shall consist of all the members of the United Nations.

2. Each Member shall have not more than five representatives in the General Assembly.

### Functions and Powers

#### Article 10

The General Assembly may discuss any questions or any matters within the scope of the present Charter or relating to the powers and functions of any organs provided for in the present Charter, and except as provided in Article 12, may make recommendations to the Members of the United Nations or to the Security Council or to both on any such questions or matters.

#### Article 11

1. The General Assembly may consider the general principles of cooperation for the maintenance of international peace and security, including the principles governing disarmament and the regulation of armaments, and may make recommendations with regard to such principles to the Members or to the Security Council or to both.

2. The General Assembly may discuss any questions relating to the maintenance of international peace and security brought before it by any Member of the United Nations, or by the Security Council, or by a state which is not a Member of the United Nations, in accordance with Article 35, paragraph 2, and, except as provided in Article 12, may make recommendations with regard to any such question to the state or states concerned or to the Security Council or to both. Any such question on which action is necessary shall be referred to the Security Council by the General Assembly either before or after discussion.

3. The General Assembly may call the attention of the Security Council to situations which are likely to endanger international peace and security.

4. The powers of the General Assembly set forth in this Article shall not limit the general scope of Article 10.

#### Article 12

1. While the Security Council is exercising in respect of any dispute or situation the functions assigned to it in the present Charter, the General Assembly shall not make any recommendations with regard to that dispute or situation unless the Security Council so requests.

2. The Secretary-General, with the consent of the Security Council, shall notify the General Assembly at each session of any matters relative to the maintenance of international peace and security which are being dealt with by the Security Council, and shall similarly notify the General Assembly, or the Members of the United Na-

tions if the General Assembly is not in session, immediately the Security Council ceases to deal with such matters.

### Article 13

1. The General Assembly shall initiate studies and make recommendations for the purpose of:

(a) promoting international cooperation in the political field and encouraging the progressive development of international law and its codification;

(b) promoting international cooperation in the economic, social, cultural, educational, and health fields, and assisting in the realization of human rights and fundamental freedoms for all without distinction as to race, sex, language, or religion.

2. The further responsibilities, functions and powers of the General Assembly with respect to matters mentioned in paragraph 1 (b) above are set forth in Chapters IX and X.

### Article 14

Subject to the provisions of Article 12, the General Assembly may recommend measures for the peaceful adjustment of any situation, regardless of origin, which it deems likely to impair the general welfare or friendly relations among nations, including situations resulting from a violation of the provisions of the present Charter setting forth the Purposes and Principles of the United Nations.

### Article 15

1. The General Assembly shall receive and consider annual and special reports from the Security Council; these reports shall include an account of the measures that the Security Council has decided upon or taken to maintain international peace and security.

2. The General Assembly shall receive and consider reports from the other organs of the United Nations.

### Article 16

The General Assembly shall perform such functions with respect to the international trusteeship system as are assigned to it under Chapters XII and XIII, including the approval of the trusteeship agreements for areas not designated as strategic.

### Article 17

1. The General Assembly shall consider and approve the budget of the Organization.

2. The expenses of the Organization shall be borne by the Members as apportioned by the General Assembly.

3. The General Assembly shall consider and approve any financial and budgetary arrangements with specialized agencies re-

ferred to in Article 57 and shall examine the administrative budgets of such specialized agencies with a view to making recommendations to the agencies concerned.

### Voting

#### Article 18

1. Each member of the General Assembly shall have one vote.

2. Decisions of the General Assembly on important questions shall be made by a two-thirds majority of the members present and voting. These questions shall include: recommendations with respect to the maintenance of international peace and security, the election of the non-permanent members of the Security Council, the election of the members of the Economic and Social Council, the election of members of the Trusteeship Council in accordance with paragraph 1 (c) of Article 86, the admission of new Members to the United Nations, the suspension of the rights and privileges of membership, the expulsion of Members, questions relating to the operation of the trusteeship system, and budgetary questions.

3. Decisions on other questions, including the determination of additional categories of questions to be decided by a two-thirds majority, shall be made by a majority of the members present and voting.

#### Article 19

A Member of the United Nations which is in arrears in the payment of its financial contributions to the Organization shall have no vote in the General Assembly if the amount of its arrears equals or exceeds the amount of the contributions due from it for the preceding two full years. The General Assembly may, nevertheless, permit such a Member to vote if it is satisfied that the failure to pay is due to conditions beyond the control of the Member.

### Procedure

#### Article 20

The General Assembly shall meet in regular annual sessions and in such special sessions as occasion may require. Special sessions shall be convoked by the Secretary-General at the request of the Security Council or of a majority of the Members of the United Nations.

#### Article 21

The General Assembly shall adopt its own rules of procedure. It shall elect its President for each session.

#### Article 22

The General Assembly may establish such subsidiary organs as it deems necessary for the performance of its functions.

## CHAPTER V

The Security Council  
Composition

## Article 23

1. The Security Council shall consist of eleven Members of the United Nations. The Republic of China, France, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America shall be permanent members of the Security Council. The General Assembly shall elect six other Members of the United Nations to be non-permanent members of the Security Council, due regard being specially paid, in the first instance to the contribution of members of the United Nations to the maintenance of international peace and security and to the other purposes of the Organization, and also to equitable geographical distribution.

2. The non-permanent members of the Security Council shall be elected for a term of two years. In the first election of the non-permanent members, however, three shall be chosen for a term of one year. A retiring member shall not be eligible for immediate re-election.

3. Each member of the Security Council shall have one representative.

## Functions and Powers

## Article 24

1. In order to insure prompt and effective action by the United Nations, its Members confer on the Security Council primary responsibility for the maintenance of international peace and security, and agree that in carrying out its duties under this responsibility the Security Council acts on their behalf.

2. In discharging these duties the Security Council shall act in accordance with the Purposes and Principles of the United Nations. The specific powers granted to the Security Council for the discharge of these duties are laid down in Chapters VI, VII, VIII, and XII.

3. The Security Council shall submit annual and, when necessary, special reports to the General Assembly for its consideration.

## Article 25

The Members of the United Nations agree to accept and carry out the decisions of the Security Council in accordance with the present Charter.

## Article 26

In order to promote the establishment and maintenance of international peace and security with the least diversion for armaments of the world's human and eco-

nomie resources, the Security Council shall be responsible for formulating, with the assistance of the Military Staff Committee referred to in Article 47, plans to be submitted to the Members of the United Nations for the establishment of a system for the regulation of armaments.

## Voting

## Article 27

1. Each member of the Security Council shall have one vote.

2. Decisions of the Security Council on procedural matters shall be made by a majority of seven members.

3. Decisions of the Security Council on all other matters shall be made by a majority of seven members including the concurring votes of the permanent members; provided that, in decisions under Chapter VI, and under paragraph 3 of Article 52, a party to a dispute shall abstain from voting.

## Procedure

## Article 28

1. The Security Council shall be so organized as to be able to function continuously. Each member of the Security Council shall for this purpose be represented at all times at the seat of the Organization.

2. The Security Council shall hold periodic meetings at which each of its members may, if it so desires, be represented by a member of the government or by some other specially designated representative.

3. The Security Council may hold meetings at such places other than the seat of the Organization as in its judgment will best facilitate its work.

## Article 29

The Security Council may establish such subsidiary organs as it deems necessary for the performance of its functions.

## Article 30

The Security Council shall adopt its own rules of procedure, including the method of selecting its President.

## Article 31

Any Member of the United Nations which is not a member of the Security Council may participate, without vote, in the discussion of any question brought before the Security Council whenever the latter considers that the interests of that Member are specially affected.

## Article 32

Any Member of the United Nations which is not a member of the Security



council or any state which is not a Member of the United Nations, if it is a party to a dispute under consideration by the Security Council, shall be invited to participate, without vote, in the discussion relating to the dispute. The Security Council shall lay down such conditions as it deems just for the participation of a state which is not a Member of the United Nations.

## CHAPTER VI

### Pacific Settlement of Disputes

#### Article 33

1. The parties to any dispute, the continuance of which is likely to endanger the maintenance of international peace and security, shall, first of all, seek a solution by negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.

2. The Security Council shall, when it deems necessary, call upon the parties to settle their dispute by such means.

#### Article 34

The Security Council may investigate any dispute, or any situation which might lead to international friction or give rise to a dispute, in order to determine whether the continuance of the dispute or situation is likely to endanger the maintenance of international peace and security.

#### Article 35

1. Any Member of the United Nations may bring any dispute, or any situation of the nature referred to in Article 34 to the attention of the Security Council or of the General Assembly.

2. A state which is not a Member of the United Nations may bring to the attention of the Security Council or of the General Assembly any dispute to which it is a party if it accepts in advance, for the purposes of the dispute, the obligations of pacific settlement provided in the present Charter.

3. The proceedings of the General Assembly in respect of matters brought to its attention under this Article will be subject to the provisions of Articles 11 and 12.

#### Article 36

1. The Security Council may, at any stage of a dispute of the nature referred to in Article 33 or of a situation of like nature, recommend appropriate procedures or methods of adjustment.

2. The Security Council should take into consideration any procedures for the settlement of the dispute which have already been adopted by the parties.

3. In making recommendations under this Article the Security Council should also take into consideration that legal disputes should as a general rule be referred by the parties to the International Court of Justice in accordance with the provisions of the Statute of the Court.

#### Article 37

1. Should the parties to a dispute of the nature referred to in Article 33 fail to settle it by the means indicated in that Article, they shall refer it to the Security Council.

2. If the Security Council deems that the continuance of the dispute is in fact likely to endanger the maintenance of international peace and security, it shall decide whether to take action under Article 36 or to recommend such terms of settlement as it may consider appropriate.

#### Article 38

Without prejudice to the provisions of Articles 33 to 37, the Security Council may, if all the parties to any dispute so request, make recommendations to the parties with a view to a pacific settlement of the dispute.

## CHAPTER VII

### Action with Respect to Threats to the Peace, Breaches of the Peace, and Acts of Aggression

#### Article 39

The Security Council shall determine the existence of any threat to the peace, breach of the peace, or act of aggression and shall make recommendations, or decide what measures shall be taken in accordance with Articles 41 and 42, to maintain or restore international peace and security.

#### Article 40

In order to prevent an aggravation of the situation, the Security Council may, before making the recommendations or deciding upon the measures provided for in Article 39, call upon the parties concerned to comply with such provisional measures as it deems necessary or desirable. Such provisional measures shall be without prejudice to the rights, claims, or position of the parties concerned. The Security Council shall duly take account of failure to comply with such provisional measures.

#### Article 41

The Security Council may decide what measures not involving the use of armed force are to be employed to give effect

to its decisions, and it may call upon the Members of the United Nations to apply such measures. These may include complete or partial interruption of economic relations and of rail, sea, air, postal, telegraphic, radio, and other means of communication, and the severance of diplomatic relations.

### Article 42

Should the Security Council consider that measures provided for in Article 41 would be inadequate or have proved to be inadequate, it may take such action by air, sea, or land forces as may be necessary to maintain or restore international peace and security. Such action may include demonstrations, blockade, and other operations by air, sea, or land forces of Members of the United Nations.

### Article 43

1. All Members of the United Nations, in order to contribute to the maintenance of international peace and security, undertake to make available to the Security Council, on its call and in accordance with a special agreement or agreements, armed forces, assistance, and facilities, including rights of passage, necessary for the purpose of maintaining international peace and security.

2. Such agreement or agreements shall govern the numbers and types of forces, their degree of readiness and general location, and the nature of the facilities and assistance to be provided.

3. The agreement or agreements shall be negotiated as soon as possible on the initiative of the Security Council. They shall be concluded between the Security Council and Members or between the Security Council and groups of Members and shall be subject to ratification by the signatory states in accordance with their respective constitutional processes.

### Article 44

When the Security Council has decided to use force it shall, before calling upon a Member not represented on it to provide armed forces in fulfillment of the obligations assumed under Article 43, invite that Member, if the Member so desires, to participate in the decisions of the Security Council concerning the employment of contingents of that Member's armed forces.

### Article 45

In order to enable the United Nations to take urgent military measures, Members shall hold immediately available national air-force contingents for combined international enforcement action. The strength and degree of readiness of these contingents and plans for their combined action shall be determined, within the limits laid

down in the special agreement or agreements referred to in Article 43, by the Security Council with the assistance of the Military Staff Committee.

### Article 46

Plans for the application of armed force shall be made by the Security Council with the assistance of the Military Staff Committee.

### Article 47

1. There shall be established a Military Staff Committee to advise and assist the Security Council on all questions relating to the Security Council's military requirements for the maintenance of international peace and security, the employment and command of forces placed at its disposal, the regulation of armaments, and possible disarmament.

2. The Military Staff Committee shall consist of the Chiefs of Staff of the permanent members of the Security Council or their representatives. Any Member of the United Nations not permanently represented on the Committee shall be invited by the Committee to be associated with it when the efficient discharge of the Committee's responsibilities requires the participation of that Member in its work.

3. The Military Staff Committee shall be responsible under the Security Council for the strategic direction of any armed forces placed at the disposal of the Security Council. Questions relating to the command of such forces shall be worked out subsequently.

4. The Military Staff Committee, with the authorization of the Security Council and after consultation with appropriate regional agencies, may establish regional subcommittees.

### Article 48

1. The action required to carry out the decisions of the Security Council for the maintenance of international peace and security shall be taken by all the Members of the United Nations or by some of them as the Security Council may determine.

2. Such decisions shall be carried out by the Members of the United Nations directly and through their action in the appropriate international agencies of which they are members.

### Article 49

The Members of the United Nations shall join in affording mutual assistance in carrying out the measures decided upon by the Security Council.

### Article 50

If preventive or enforcement measures against any state are taken by the Security Council, any other state, whether

Member of the United Nations or not, which finds itself confronted with special economic problems arising from the carrying out of those measures shall have the right to consult the Security Council with regard to a solution of those problems.

### Article 51

Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security. Measures taken by Members in the exercise of this right of self-defense shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security.

## CHAPTER VIII

### Regional Arrangements

#### Article 52

1. Nothing in the present Charter precludes the existence of regional arrangements or agencies for dealing with such matters relating to the maintenance of international peace and security as are appropriate for regional action, provided that such arrangements or agencies and their activities are consistent with the Purposes and Principles of the United Nations.

2. The Members of the United Nations entering into such arrangements or constituting such agencies shall make every effort to achieve pacific settlement of local disputes through such regional arrangements or by such regional agencies before referring them to the Security Council.

3. The Security Council shall encourage the development of pacific settlement of local disputes through such regional arrangements or by such regional agencies either on the initiative of the states concerned or by reference from the Security Council.

4. This Article in no way impairs the application of Articles 34 and 35.

#### Article 53

1. The Security Council shall, where appropriate, utilize such regional arrangements or agencies for enforcement action under its authority. But no enforcement action shall be taken under regional arrangements or by regional agencies without the authorization of the Security Council, with the exception of measures against any enemy state, as defined in para-

graph 2 of this Article, provided for pursuant to Article 107 or in regional arrangements directed against renewal of aggressive policy on the part of any such state, until such time as the Organization may, on request of the Governments concerned, be charged with the responsibility for preventing further aggression by such a state.

2. The term enemy state as used in paragraph 1 of this Article applies to any state which during the Second World War has been an enemy of any signatory of the present Charter.

### Article 54

The Security Council shall at all times be kept fully informed of activities undertaken or in contemplation under regional arrangements or by regional agencies for the maintenance of international peace and security.

## CHAPTER IX

### International Economic and Social Cooperation

#### Article 55

With a view to the creation of conditions of stability and well-being which are necessary for peaceful and friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, the United Nations shall promote:

(a) higher standards of living, full employment, and conditions of economic and social progress and development;

(b) solutions of international economic, social, health, and related problems; and international cultural and educational cooperation; and

(c) universal respect for, and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language, or religion.

#### Article 56

All Members pledge themselves to take joint and separate action in cooperation with the Organization for the achievement of the purposes set forth in Article 55.

#### Article 57

1. The various specialized agencies, established by intergovernmental agreement and having wide international responsibilities, as defined in their basic instruments, in economic, social, cultural, educational, health, and related fields, shall be brought into relationship with the United Nations in accordance with the provisions of Article 63.

2. Such agencies thus brought into relationship with the United Nations are



hereinafter referred to as specialized agencies.

### Article 58

The Organization shall make recommendations for the coordination of the policies and activities of the specialized agencies.

### Article 59

The Organization shall, where appropriate, initiate negotiations among the states concerned for the creation of any new specialized agencies required for the accomplishment of the purposes set forth in Article 55.

### Article 60

Responsibility for the discharge of the functions of the Organization set forth in this Chapter shall be vested in the General Assembly and, under the authority of the General Assembly, in the Economic and Social Council, which shall have for this purpose the powers set forth in Chapter X.

## CHAPTER X

### Economic and Social Council Composition

#### Article 61

1. The Economic and Social Council shall consist of eighteen Members of the United Nations elected by the General Assembly.

2. Subject to the provisions of paragraph 3, six members of the Economic and Social Council shall be elected each year for a term of three years. A retiring member shall be eligible for immediate re-election.

3. At the first election, eighteen members of the Economic and Social Council shall be chosen. The term of office of six members so chosen shall expire at the end of one year, and of six other members at the end of two years, in accordance with arrangements made by the General Assembly.

4. Each member of the Economic and Social Council shall have one representative.

### Functions and Powers

#### Article 62

1. The Economic and Social Council may make or initiate studies and reports with respect to international economic, social, cultural, educational, health, and related matters and may make recommendations with respect to any such matters to the General Assembly, to the Members of the United Nations, and to the specialized agencies concerned.

2. It may make recommendations for the purpose of promoting respect for, and observance of, human rights and fundamental freedoms for all.

3. It may prepare draft conventions for submission to the General Assembly, with respect to matters falling within its competence.

4. It may call, in accordance with the rules prescribed by the United Nations, international conferences on matters falling within its competence.

### Article 63

1. The Economic and Social Council may enter into agreements with any of the agencies referred to in Article 57, defining the terms on which the agency concerned shall be brought into relationship with the United Nations. Such agreements shall be subject to approval by the General Assembly.

2. It may coordinate the activities of the specialized agencies through consultation with and recommendations to such agencies and through recommendations to the General Assembly and to the Members of the United Nations.

### Article 64

1. The Economic and Social Council may take appropriate steps to obtain regular reports from the specialized agencies. It may make arrangements with the Members of the United Nations and with the specialized agencies to obtain reports on the steps taken to give effect to its own recommendations and to recommendations on matters falling within its competence made by the General Assembly.

2. It may communicate its observations on these reports to the General Assembly.

### Article 65

The Economic and Social Council may furnish information to the Security Council and shall assist the Security Council upon its request.

### Article 66

1. The Economic and Social Council shall perform such functions as fall within its competence in connection with the carrying out of the recommendations of the General Assembly.

2. It may, with the approval of the General Assembly, perform services at the request of Members of the United Nations and at the request of specialized agencies.

3. It shall perform such other functions as are specified elsewhere in the present Charter or as may be assigned to it by the General Assembly.

### Voting

#### Article 67

1. Each member of the Economic and Social Council shall have one vote.

2. Decisions of the Economic and Social Council shall be made by a majority of the members present and voting.

## Procedure

### Article 68

The Economic and Social Council shall set up commissions in economic and social fields and for the promotion of human rights, and such other commissions as may be required for the performance of its functions.

### Article 69

The Economic and Social Council shall invite any Member of the United Nations to participate, without vote, in its deliberations on any matter of particular concern to that Member.

### Article 70

The Economic and Social Council may make arrangements for representatives of the specialized agencies to participate, without vote, in its deliberations and in those of the commissions established by it, and for its representatives to participate in the deliberations of the specialized agencies.

### Article 71

The Economic and Social Council may make suitable arrangements for consultation with non-governmental organizations which are concerned with matters within its competence. Such arrangements may be made with international organizations and, where appropriate, with national organizations after consultation with the Member of the United Nations concerned.

### Article 72

1. The Economic and Social Council shall adopt its own rules of procedure, including the method of selecting its President.

2. The Economic and Social Council shall meet as required in accordance with its rules, which shall include provision for the convening of meetings on the request of a majority of its members.

## CHAPTER XI

### Declaration Regarding Non-Self-Governing Territories

#### Article 73

Members of the United Nations which have or assume responsibilities for the administration of territories whose peoples have not yet attained a full measure of self-government recognize the principle that the interests of the inhabitants of these territories are paramount, and ac-

cept as a sacred trust the obligation to promote to the utmost, within the system of international peace and security established by the present Charter, the well-being of the inhabitants of these territories, and, to this end:

(a) to ensure, with due respect for the culture of the peoples concerned, their political, economic, social, and educational advancement, their just treatment, and their protection against abuses;

(b) to develop self-government, to take due account of the political aspirations of the peoples, and to assist them in the progressive development of their free political institutions, according to the particular circumstances of each territory and its peoples and their varying stages of advancement;

(c) to further international peace and security;

(d) to promote constructive measures of development, to encourage research, and to cooperate with one another and, when and where appropriate, with specialized international bodies with a view to the practical achievement of the social, economic and scientific purposes set forth in this Article; and

(e) to transmit regularly to the Secretary-General for information purposes, subject to such limitation as security and constitutional considerations may require, statistical and other information of a technical nature relating to economic, social, and educational conditions in the territories for which they are respectively responsible other than those territories to which Chapters XII and XIII apply.

### Article 74

Members of the United Nations also agree that their policy in respect of the territories to which this Chapter applies, no less than in respect of their metropolitan areas, must be based on the general principle of good-neighborliness, due account being taken of the interests and well-being of the rest of the world, in social, economic, and commercial matters.

## CHAPTER XII

### International Trusteeship System

#### Article 75

The United Nations shall establish under its authority an international trusteeship system for the administration and supervision of such territories as may be placed thereunder by subsequent individual agreements. These territories are hereinafter referred to as trust territories.

#### Article 76

The basic objectives of the trusteeship system, in accordance with the Purposes

of the United Nations laid down in Article 1 of the present Charter, shall be:

(a) to further international peace and security;

(b) to promote the political, economic, social, and educational advancement of the inhabitants of the trust territories, and their progressive development towards self-government or independence as may be appropriate to the particular circumstances of each territory and its peoples and the freely expressed wishes of the peoples concerned, and as may be provided by the terms of each trusteeship agreement;

(c) to encourage respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion, and to encourage recognition of the interdependence of the peoples of the world; and

(d) to ensure equal treatment in social, economic, and commercial matters for all Members of the United Nations and their nationals, and also equal treatment for the latter in the administration of justice, without prejudice to the attainment of the foregoing objectives and subject to the provisions of Article 80.

### Article 77

1. The trusteeship system shall apply to such territories in the following categories as may be placed thereunder by means of trusteeship agreements:

(a) territories now held under mandate;

(b) territories which may be detached from enemy states as a result of the Second World War; and

(c) territories voluntarily placed under the system by states responsible for their administration.

2. It will be a matter for subsequent agreement as to which territories in the foregoing categories will be brought under the trusteeship system and upon what terms.

### Article 78

The trusteeship system shall not apply to territories which have become Members of the United Nations, relationship among which shall be based on respect for the principle of sovereign equality.

### Article 79

The terms of trusteeship for each territory to be placed under the trusteeship system, including any alteration or amendment, shall be agreed upon by the states directly concerned, including the mandatory power in the case of territories held under mandate by a Member of the United Nations, and shall be approved as provided for in Articles 83 and 85.

### Article 80

1. Except as may be agreed upon in individual trusteeship agreements, made under Articles 77, 79, and 81, placing each territory under the trusteeship system, and until such agreements have been concluded, nothing in this Chapter shall be construed in or of itself to alter in any manner the rights whatsoever of any states or any peoples or the terms of existing international instruments to which Members of the United Nations may respectively be parties.

2. Paragraph 1 of this Article shall not be interpreted as giving grounds for delay or postponement of the negotiation and conclusion of agreements for placing mandated and other territories under the trusteeship system as provided for in Article 77.

### Article 81

The trusteeship agreement shall in each case include the terms under which the trust territory will be administered and designate the authority which will exercise the administration of the trust territory. Such authority, hereinafter called the administering authority, may be one or more states or the Organization itself.

### Article 82

There may be designated, in any trusteeship agreement, a strategic area or areas which may include part or all of the trust territory to which the agreement applies without prejudice to any special agreement or agreements made under Article 43.

### Article 83

1. All functions of the United Nations relating to strategic areas, including the approval of the terms of the trusteeship agreements and of their alteration or amendment, shall be exercised by the Security Council.

2. The basic objectives set forth in Article 76 shall be applicable to the people of each strategic area.

3. The Security Council shall, subject to the provisions of the trusteeship agreements and without prejudice to security considerations, avail itself of the assistance of the Trusteeship Council to perform those functions of the United Nations under the trusteeship system relating to political, economic, social, and educational matters in the strategic areas.

### Article 84

It shall be the duty of the administering authority to ensure that the trust territory shall play its part in the maintenance of international peace and security. To this end the administering authority may make use of volunteer forces, facilities,



ies, and assistance from the trust territory in carrying out the obligations towards the Security Council undertaken in this regard by the administering authority, as well as for local defense and the maintenance of law and order within the trust territory.

### Article 85

1. The functions of the United Nations with regard to trusteeship agreements for all areas not designated as strategic, including the approval of the terms of the trusteeship agreements and of their alteration or amendment, shall be exercised by the General Assembly.

2. The Trusteeship Council, operating under the authority of the General Assembly, shall assist the General Assembly in carrying out these functions.

## CHAPTER XIII

### The Trusteeship Council Composition

#### Article 86

1. The Trusteeship Council shall consist of the following Members of the United Nations:

(a) those Members administering trust territories;

(b) such of those Members mentioned by name in Article 23 as are not administering trust territories; and

(c) as many other Members elected for three-year terms by the General Assembly as may be necessary to ensure that the total number of members of the Trusteeship Council is equally divided between those Members of the United Nations which administer trust territories and those which do not.

2. Each member of the Trusteeship Council shall designate one specially qualified person to represent it therein.

### Functions and Powers

#### Article 87

The General Assembly and, under its authority, the Trusteeship Council, in carrying out their functions, may:

(a) consider reports submitted by the administering authority;

(b) accept petitions and examine them in consultation with the administering authority;

(c) provide for periodic visits to the respective trust territories at times agreed upon with the administering authority; and

(d) take these and other actions in conformity with the terms of the trusteeship agreements.

### Article 88

The Trusteeship Council shall formulate a questionnaire on the political, economic, social, and educational advancement of the inhabitants of each trust territory, and the administering authority for each trust territory within the competence of the General Assembly shall make an annual report to the General Assembly upon the basis of such questionnaire.

### Voting

#### Article 89

1. Each member of the Trusteeship Council shall have one vote.

2. Decisions of the Trusteeship Council shall be made by a majority of the members present and voting.

### Procedure

#### Article 90

1. The Trusteeship Council shall adopt its own rules of procedure, including the method of selecting its President.

2. The Trusteeship Council shall meet as required in accordance with its rules, which shall include provision for the convening of meetings on the request of a majority of its members.

### Article 91

The Trusteeship Council shall, when appropriate, avail itself of the assistance of the Economic and Social Council and of the specialized agencies in regard to matters with which they are respectively concerned.

## CHAPTER XIV

### The International Court of Justice

#### Article 92

The International Court of Justice shall be the principal judicial organ of the United Nations. It shall function in accordance with the annexed Statute, which is based upon the Statute of the Permanent Court of International Justice and forms an integral part of the present Charter.

#### Article 93

1. All Members of the United Nations are *ipso facto* parties to the Statute of the International Court of Justice.

2. A state which is not a Member of the United Nations may become a party to the Statute of the International Court of Justice on condition to be determined in each case by the General Assembly upon the recommendation of the Security Council.

#### Article 94

1. Each Member of the United Nations undertakes to comply with the decision of

the International Court of Justice in any case to which it is a party.

2. If any party to a case fails to perform the obligations incumbent upon it under a judgment rendered by the Court, the other party may have recourse to the Security Council, which may, if it deems necessary, make recommendations or decide upon measures to be taken to give effect to the judgment.

### Article 95

Nothing in the present Charter shall prevent Members of the United Nations from entrusting the solution of their differences to other tribunals by virtue of agreements already in existence or which may be concluded in the future.

### Article 96

1. The General Assembly or the Security Council may request the International Court of Justice to give an advisory opinion on any legal question.

2. Other organs of the United Nations and specialized agencies, which may at any time be so authorized by the General Assembly, may also request advisory opinions of the Court on legal questions arising within the scope of their activities.

## CHAPTER XV

### The Secretariat

#### Article 97

The Secretariat shall comprise a Secretary-General and such staff as the Organization may require. The Secretary-General shall be appointed by the General Assembly upon the recommendation of the Security Council. He shall be the chief administrative officer of the Organization.

#### Article 98

The Secretary-General shall act in that capacity in all meetings of the General Assembly, of the Security Council, of the Economic and Social Council, and of the Trusteeship Council, and shall perform such other functions as are entrusted to him by these organs. The Secretary-General shall make an annual report to the General Assembly on the work of the Organization.

#### Article 99

The Secretary-General may bring to the attention of the Security Council any matter which in his opinion may threaten the maintenance of international peace and security.

#### Article 100

1. In the performance of their duties the Secretary-General and the staff shall not seek or receive instructions from any government or from any other authority external to the Organization. They shall

refrain from any action which might reflect on their position as international officials responsible only to the Organization.

2. Each Member of the United Nations undertakes to respect the exclusively international character of the responsibilities of the Secretary-General and the staff and not to seek to influence them in the discharge of their responsibilities.

### Article 101

1. The staff shall be appointed by the Secretary-General under regulations established by the General Assembly.

2. Appropriate staffs shall be permanently assigned to the Economic and Social Council, the Trusteeship Council, and, as required, to other organs of the United Nations. These staffs shall form a part of the Secretariat.

3. The paramount consideration in the employment of the staff and in the determination of the conditions of service shall be the necessity of securing the highest standards of efficiency, competence, and integrity. Due regard shall be paid to the importance of recruiting the staff on as wide a geographical basis as possible.

## CHAPTER XVI

### Miscellaneous Provisions

#### Article 102

1. Every treaty and every international agreement entered into by any Member of the United Nations after the present Charter comes into force shall as soon as possible be registered with the Secretariat and published by it.

2. No party to any such treaty or international agreement which has not been registered in accordance with the provisions of paragraph 1 of this Article may invoke that treaty or agreement before an organ of the United Nations.

#### Article 103

In the event of a conflict between the obligations of the Members of the United Nations under the present Charter and their obligations under any other international agreement, their obligations under the present Charter shall prevail.

#### Article 104

The Organization shall enjoy in the territory of each of its Members such legal capacity as may be necessary for the exercise of its functions and the fulfillment of its purposes.

#### Article 105

1. The Organization shall enjoy in the territory of each of its Members such privileges and immunities as are necessary for the fulfillment of its purposes.

2. Representatives of the Members of the United Nations and officials of the Organization shall similarly enjoy such privileges and immunities as are necessary for the independent exercise of their functions in connection with the Organization.

3. The General Assembly may make recommendations with a view to determining the details of the application of paragraphs 1 and 2 of this Article or may propose conventions to the Members of the United Nations for this purpose.

## CHAPTER XVII

### Transitional Security Arrangements

#### Article 106

Pending the coming into force of such special agreements referred to in Article 103 as in the opinion of the Security Council enable it to begin the exercise of its responsibilities under Article 42, the parties to the Four-Nation Declaration, signed at Moscow, October 30, 1943, and France, shall, in accordance with the provisions of paragraph 5 of that Declaration, consult with one another and, as occasion requires with other Members of the United Nations with a view to such joint action on behalf of the Organization as may be necessary for the purpose of maintaining international peace and security.

#### Article 107

Nothing in the present Charter shall invalidate or preclude action, in relation to any state which during the Second World War has been an enemy of any signatory to the present Charter, taken or authorized as a result of that war by the Governments having responsibility for such action.

## CHAPTER XVIII

### Amendments

#### Article 108

Amendments to the present Charter shall come into force for all Members of the United Nations when they have been adopted by a vote of two-thirds of the members of the General Assembly and ratified in accordance with their respective constitutional processes by two-thirds of the Members of the United Nations, including all the permanent members of the Security Council.

#### Article 109

1. A General Conference of the Members of the United Nations for the purpose of reviewing the present Charter may be held at a date and place to be fixed by a two-thirds vote of the members of the General Assembly and by a vote of any seven members of the Security Council. Each Member of the United Nations shall have one vote at the conference.

2. Any alteration of the present Charter recommended by a two-thirds vote of the conference shall take effect when ratified in accordance with their respective constitutional processes by two-thirds of the Members of the United Nations including all the permanent members of the Security Council.

3. If such a conference has not been held before the tenth annual session of the General Assembly following the coming into force of the present Charter, the proposal to call such a conference shall be placed on the agenda of that session of the General Assembly, and the conference shall be held if so decided by a majority vote of the members of the General Assembly and by a vote of any seven members of the Security Council.

## CHAPTER XIX

### Ratification and Signature

#### Article 110

1. The present Charter shall be ratified by the signatory states in accordance with their respective constitutional processes.

2. The ratifications shall be deposited with the Government of the United States of America, which shall notify all the signatory states of each deposit as well as the Secretary-General of the Organization when he has been appointed.

3. The present Charter shall come into force upon the deposit of ratifications by the Republic of China, France, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America; and by a majority of the other signatory states. A protocol of the ratifications deposited shall thereupon be drawn up by the Government of the United States of America which shall communicate copies thereof to all the signatory states.

4. The states signatory to the present Charter which ratify it after it has come into force will become original Members of the United Nations on the date of the deposit of their respective ratifications.

#### Article 111

The present Charter, of which the Chinese, French, Russian, English, and Spanish texts are equally authentic, shall remain deposited in the archives of the Government of the United States of America. Duly certified copies thereof shall be transmitted by that Government to the Governments of the other signatory states.

IN FAITH WHEREOF the representatives of the Governments of the United Nations have signed the present Charter.

DONE at the city of San Francisco the twenty-sixth day of June, one thousand nine hundred and forty-five.



## SPORTS ORGANIZATIONS AND INFORMATION BUREAUS

- AMATEUR ATHLETIC UNION OF THE U. S. 233 Broadway, New York 7, N. Y.
- AMATEUR BICYCLE LEAGUE OF AMERICA. 2320 Grand Ave., New York 68, N. Y.
- AMATEUR FENCERS LEAGUE OF AMERICA. 70 E. 45th St., New York 17, N. Y.
- AMATEUR HOCKEY ASSN. OF THE U. S. Madison Square Garden, 307 W. 49th St., New York 19, N. Y.
- AMATEUR SKATING UNION OF THE U. S. 5750 Oleatha Ave., St. Louis 9, Mo.
- AMATEUR SOFTBALL ASSN. OF AMERICA. Suite 401, 11 Hill St., Newark 2, N. J.
- AMATEUR TRAPSHOOTING ASSN. OF AMERICA. Vandalia, Ohio
- AMERICAN AMATEUR BASEBALL CONGRESS. Box 44, Battle Creek, Mich.
- AMERICAN BADMINTON ASSN. 905 So. Los Robles Ave., Pasadena, Calif.
- AMERICAN BOWLING CONGRESS. 1572 E. Capitol Drive, Milwaukee 11, Wis.
- AMERICAN CANOE ASSN. 500 11th St., Brooklyn 15, N. Y.
- AMERICAN HOCKEY LEAGUE. Box 190, Hempstead, N. Y.
- AMERICAN HORSE SHOWS ASSN. 90 Broad St., New York 4.
- AMERICAN KENNEL CLUB. 221 Fourth Ave., New York 3.
- AMERICAN LAWN BOWLING ASSN. 10276 Orton Ave., Los Angeles 64, Calif.
- AMERICAN LEAGUE SERVICE BUREAU (Baseball). 310 S. Michigan Ave., Chicago 4, Ill.
- AMERICAN MOTORCYCLE ASSOCIATION. 106 Butties Ave., Columbus 8, Ohio
- AMERICAN POWER BOAT ASSN. 700 Canton Ave., Detroit 7, Mich.
- AMERICAN RACING DRIVERS CLUB (midget auto racing). 309 West 50th St., New York 19, N. Y.
- AMERICAN ROQUE LEAGUE, 5439 Vanderbilt Ave., Dallas 6, Texas.
- AMERICAN WATER SKI ASSN. 307 N. Michigan Ave., Chicago 1, Ill.
- BASEBALL COMMISSIONER FORD C. FRICK. 30 Rockefeller Plaza, New York 20, N. Y.
- BILLIARD CONGRESS OF AMERICA. 921 Edison Bldg., Toledo, Ohio
- BOWLING PROPRIETORS' ASSN. OF AMERICA. 185 N. Wabash Ave., Chicago 1, Ill.
- EASTERN COLLEGE ATHLETIC CONFERENCE. Military Park Hotel, 16 Park Place, Newark, N. J.
- ELIAS BASEBALL BUREAU, 11 West 42d St., New York 36
- FISH AND WILDLIFE SERVICE. Dept. of the Interior, Washington 25, D. C.
- INTERNATL. AMATEUR ATHLETIC FEDERATION. Halton House, 23 Holborn, London, E. C. 1, England.
- INTERNATIONAL GAME FISH ASSN. American Museum of Natural History, New York 24, N. Y.
- LITTLE LEAGUE BASEBALL. Williamsport, Pa.
- NATL. ARCHERY ASSN. OF THE U. S. 20212 Bayview Ave., Santa Ana, Calif.
- NATL. ASSN. OF AMATEUR OARSMEN. 119 Heller Parkway, Newark 4, N. J.
- NATL. ASSN. OF ANGLING AND CASTING CLUBS. 958 Paul Brown Bldg., St. Louis 1, Mo.
- NATL. ASSN. OF PROFESSIONAL BASEBALL LEAGUES (Minors). 720 E. Broad St., Columbus 15, Ohio
- NATL. ASSN. OF STATE RACING COMMISSIONERS. Box 156, Lexington, Ky.
- NATL. BASEBALL CONGRESS. Wichita 1, Kans.
- NATL. BASKETBALL ASSN. Empire State Bldg., N. Y.
- NATL. BOXING ASSN. Room 2053, New Municipal Center, Washington 1, D. C.
- NATL. COLLEGIATE ATHLETIC ASSN. Fairfax Bldg., 11th and Baltimore, Kansas City 6, Mo.
- NATL. DUCK PIN BOWLING CONGRESS. 1420 New York Ave., N.W., Washington 5, D. C.
- NATL. FOOTBALL LEAGUE. 1518 Walnut St., Philadelphia 1
- NATL. HOCKEY LEAGUE. Sun Life Bldg., Montreal, Quebec
- NATL. HORSESHOE PITCHERS ASSN. 111 Via Buena Ventura, Redondo Beach, Calif.
- NATL. LEAGUE SERVICE BUREAU (Baseball). Carew Tower, Cincinnati 2, Ohio
- NATL. RIFLE ASSN. OF AMERICA. 1600 Rhode Island Ave., Washington 6, D. C.
- NATL. SKEET SHOOTING ASSN. 3409 Oak Lawn Ave., Dallas 19, Texas.
- NATL. SKI ASSN. 100 West 13th Ave., Denver 4, Colo.
- NEW YORK RACING ASSNS. SERVICE BUREAU. 250 Park Ave., New York 17, N. Y.
- NEW YORK STATE ATHLETIC (BOXING) COMMISSION. 226 W. 47th St., New York 36, N. Y.
- NORTH AMERICAN YACHT RACING UNION. 37 West 44th St., New York 18, N. Y.
- PROFESSIONAL GOLFERS' ASSN. OF AMERICA. Broadway and Main St., Dunedin, Fla.
- PROFESSIONAL LAWN TENNIS ASSN. OF THE U. S. 146 E. 54th St., New York 22, N. Y.
- ROLLER SKATING RINK OPERATORS ASSN. OF AMERICA. 625 W. Seven Mile Rd., Detroit 3, Mich.
- THE JOCKEY CLUB. 250 Park Ave., New York 17, N. Y.
- THOROUGHbred RACING ASSNS. OF THE U. S. 925 Chrysler Bldg., New York 17, N. Y.
- U. S. AMATEUR ROLLER SKATING ASSN. 120 West 42d St., New York 18, N. Y.
- U. S. CHESS FEDERATION. 208 S. La Salle St., Chicago 4, Ill.
- U. S. FIELD HOCKEY ASSN. 24 Park Place, Rockville Centre, N. Y.
- U. S. FIGURE SKATING ASSN. Rm. 505, 30 Huntington Ave., Boston, Mass.
- U. S. GOLF ASSN. 40 E. 38th St., New York 16, N. Y.
- U. S. HANDBALL ASSN. 505 No. Michigan Ave., Chicago 11
- U. S. INTERCOLLEGIATE LACROSSE ASSN. 52 Wall St., New York 5, N. Y.
- U. S. LAWN TENNIS ASSN. 120 Broadway, New York 5, N. Y.
- U. S. OLYMPIC ASSN. Biltmore Hotel, New York 17, N. Y.
- U. S. POLO ASSN. 250 Park Ave., New York 17, N. Y.
- U. S. SOCCER FOOTBALL ASSN. 320 Fifth Ave., New York 1
- U. S. SQUASH RACQUETS ASSN. Rm. 1105, 120 Broadway, New York 5, N. Y.
- U. S. TABLE TENNIS ASSN. 6625 So. Winchester, Chicago 11.
- U. S. TROTting ASSN. 1349 E. Broad St., Columbus 5, Ohio
- U. S. VOLLEYBALL ASSN. Rm. 1705, 291 Broadway, New York 7, N. Y.
- WESTERN HOCKEY LEAGUE. 4405 White-Henry-Stuart Bldg., Seattle 1, Wash.
- WOMAN'S INTERNATIONAL BOWLING CONGRESS. 694 S. High St., Columbus 6, Ohio

# SPORTS



For 1956 sports champions and records,  
see special section beginning on Page 855.

## BASEBALL

THE POPULAR TRADITION that baseball was invented by Abner Doubleday at Cooperstown, N. Y., in 1839, has been enshrined in the Hall of Fame and National Museum of Baseball erected in that town, but research has proved that a game called "Base Ball" was played in this country and England before 1839. However, the first team baseball as we know it was played at the Elysian Fields, Hoboken, N. J., on June 19, 1846, between the Knickerbockers and the New York Nine. There was a gradual growth of baseball and an improvement of equipment and playing skill in the next fifty years. Soldiers returning home from the Civil War spread over the country the game they had learned to play in camp.

Historians have it that the first pitcher to throw a curve was William A. (Candy) Cummings in 1867. The Cincinnati Red Stockings were the first all-professional team and in 1869 they played 64 games without a loss. The standard ball of the

same size and weight, still the rule, was adopted in 1872. The first catcher's mask was worn in 1875. The National League was organized in 1876. The first chest protector was donned in 1885. The three-strike rule was put on the books in 1887 and the four-ball ticket to first base came in 1889. The pitching distance, formerly shorter, was lengthened to 60 feet 6 inches in 1893 and the rules have been only slightly modified since that time.

The American League, under the vigorous leadership of B. B. Johnson, blossomed forth as a major league in 1901. Judge Kenesaw Mountain Landis, by action of the two major leagues, became Commissioner of Baseball in 1921 and, upon his death (1944), Albert B. Chandler, former United States Senator from Kentucky, was elected to that office (1945). Chandler failed to obtain a new contract, and he was succeeded by Ford C. Frick (1951), the National League president.

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### PROFESSIONAL BASEBALL GOVERNMENT

#### NATIONAL LEAGUE—AMERICAN LEAGUE—NATIONAL ASSOCIATION

Ford C. Frick, Commissioner  
Charles M. Segar, Secretary-Treasurer  
30 Rockefeller Plaza, New York 20, N. Y.

#### NATIONAL LEAGUE

Warren C. Giles  
President-Secretary-Treasurer  
Office: Carew Tower,  
Cincinnati 2, Ohio  
Service Bureau: Dave Grote, Manager

#### AMERICAN LEAGUE

William Harriage  
President-Secretary-Treasurer  
Office: 310 South Michigan Ave.,  
Chicago 4, Ill.  
Service Bureau: Earl J. Hilligan, Manager

#### NATIONAL ASSOCIATION

George M. Trautman  
President-Treasurer  
720 East Broad St., Columbus 15, Ohio

## Baseball Statistics

Source: *The Little Red Book of Baseball*, published by The Elias Baseball Bureau, New York City.

### Record of World Series Games

(No series in 1904.)

Figures in parentheses indicate number of victories for each club. Pitchers named are winner and loser, respectively.

#### 1903—BOSTON A. L. (5) vs. PITTSBURGH N. L. (3)

(Not under Brush rules)

Managers—J. J. Collins, Boston; F. C. Clarke, Pittsburgh.

Oct. 1—Pittsburgh (Phillippe).....	7	Boston (Young).....	3	At Boston
Oct. 2—Boston (Dinneen).....	3	Pittsburgh (Leever).....	0	At Boston
Oct. 3—Pittsburgh (Phillippe).....	4	Boston (Hughes).....	2	At Boston
Oct. 6—Pittsburgh (Phillippe).....	5	Boston (Dinneen).....	4	At Pittsburgh
Oct. 7—Boston (Young).....	11	Pittsburgh (Kennedy).....	2	At Pittsburgh
Oct. 8—Boston (Dinneen).....	6	Pittsburgh (Leever).....	3	At Pittsburgh
Oct. 10—Boston (Young).....	7	Pittsburgh (Phillippe).....	3	At Pittsburgh
Oct. 13—Boston (Dinneen).....	3	Pittsburgh (Phillippe).....	0	At Boston

#### 1905—NEW YORK N. L. (4) vs. PHILADELPHIA A. L. (1)

Managers—John J. McGraw, New York; Connie Mack, Philadelphia.

Oct. 9—New York (Mathewson).....	3	Philadelphia (Plank).....	0	At Philadelphia
Oct. 10—Philadelphia (Bender).....	3	New York (McGinnity).....	1	At New York
Oct. 12—New York (Mathewson).....	9	Philadelphia (Coakley).....	0	At Philadelphia
Oct. 13—New York (McGinnity).....	1	Philadelphia (Plank).....	0	At New York
Oct. 14—New York (Mathewson).....	2	Philadelphia (Bender).....	0	At New York

#### 1906—CHICAGO A. L. (4) vs. CHICAGO N. L. (2)

Managers—Fielder Jones, Chicago A. L.; Frank L. Chance, Chicago N. L.

Oct. 9—Chicago A (Altrock).....	2	Chicago N (Brown).....	1	At Chicago Nat. Pk.
Oct. 10—Chicago N (Reulbach).....	7	Chicago A (White).....	1	At Chicago Am. Pk.
Oct. 11—Chicago A (Walsh).....	3	Chicago N (Pfister).....	0	At Chicago Nat. Pk.
Oct. 12—Chicago N (Brown).....	1	Chicago A (Altrock).....	0	At Chicago Am. Pk.
Oct. 13—Chicago A (Walsh).....	8	Chicago N (Pfister).....	6	At Chicago Nat. Pk.
Oct. 14—Chicago A (White).....	8	Chicago N (Brown).....	3	At Chicago Am. Pk.

#### 1907—CHICAGO N. L. (4) vs. DETROIT A. L. (0)

Managers—Frank L. Chance, Chicago; Hugh Jennings, Detroit.

Oct. 8—Chicago (tie).....	3	Detroit (tie).....	3	At Chicago (12 inn.)
Oct. 9—Chicago (Pfister).....	3	Detroit (Mullin).....	1	At Chicago
Oct. 10—Chicago (Reulbach).....	5	Detroit (Siever).....	1	At Chicago
Oct. 11—Chicago (Overall).....	6	Detroit (Donovan).....	1	At Detroit
Oct. 12—Chicago (Brown).....	2	Detroit (Mullin).....	0	At Detroit

#### 1908—CHICAGO N. L. (4) vs. DETROIT A. L. (1)

Managers—Frank L. Chance, Chicago; Hugh Jennings, Detroit.

Oct. 10—Chicago (Brown).....	10	Detroit (Summers).....	6	At Detroit
Oct. 11—Chicago (Overall).....	6	Detroit (Donovan).....	1	At Chicago
Oct. 12—Detroit (Mullin).....	8	Chicago (Pfister).....	3	At Chicago
Oct. 13—Chicago (Brown).....	3	Detroit (Summers).....	0	At Detroit
Oct. 14—Chicago (Overall).....	2	Detroit (Donovan).....	0	At Detroit

#### 1909—PITTSBURGH N. L. (4) vs. DETROIT A. L. (3)

Managers—Fred C. Clarke, Pittsburgh; Hugh Jennings, Detroit.

Oct. 8—Pittsburgh (Adams).....	4	Detroit (Mullin).....	1	At Pittsburgh
Oct. 9—Detroit (Donovan).....	7	Pittsburgh (Camnitz).....	2	At Pittsburgh
Oct. 11—Pittsburgh (Maddox).....	8	Detroit (Summers).....	6	At Detroit
Oct. 12—Detroit (Mullin).....	5	Pittsburgh (Leifield).....	0	At Detroit
Oct. 13—Pittsburgh (Adams).....	8	Detroit (Summers).....	4	At Pittsburgh
Oct. 14—Detroit (Mullin).....	5	Pittsburgh (Willis).....	4	At Detroit
Oct. 16—Pittsburgh (Adams).....	8	Detroit (Donovan).....	0	At Detroit



**1910—PHILADELPHIA A. L. (4) vs. CHICAGO N. L. (1)**

Managers—Connie Mack, Philadelphia; Frank L. Chance, Chicago.

ct. 17—Philadelphia (Bender).....	4	Chicago (Overall).....	1	At Philadelphia
ct. 18—Philadelphia (Coombs).....	9	Chicago (Brown).....	3	At Philadelphia
ct. 20—Philadelphia (Coombs).....	12	Chicago (McIntire).....	5	At Chicago
ct. 22—Chicago (Brown).....	4	Philadelphia (Bender).....	3	At Chicago (10 inn.)
ct. 23—Philadelphia (Coombs).....	7	Chicago (Brown).....	2	At Chicago

**1911—PHILADELPHIA A. L. (4) vs. NEW YORK N. L. (2)**

Managers—Connie Mack, Philadelphia; John J. McGraw, New York.

ct. 14—New York (Mathewson).....	2	Philadelphia (Bender).....	1	At New York
ct. 16—Philadelphia (Plank).....	3	New York (Marquard).....	1	At Philadelphia
ct. 17—Philadelphia (Coombs).....	3	New York (Mathewson).....	2	At New York (11 inn.)
ct. 24—Philadelphia (Bender).....	4	New York (Mathewson).....	2	At Philadelphia
ct. 25—New York (Crandall).....	4	Philadelphia (Plank).....	3	At New York (10 inn.)
ct. 26—Philadelphia (Bender).....	13	New York (Ames).....	2	At Philadelphia

**1912—BOSTON A. L. (4) vs. NEW YORK N. L. (3)**

Managers—J. Garland Stahl, Boston; John J. McGraw, New York.

ct. 8—Boston (Wood).....	4	New York (Tesreau).....	3	At New York
ct. 9—Boston (tie).....	6	New York (tie).....	8	At Boston (11 inn.)
ct. 10—New York (Marquard).....	2	Boston (O'Brien).....	1	At Boston
ct. 11—Boston (Wood).....	3	New York (Tesreau).....	1	At New York
ct. 12—Boston (Jedient).....	2	New York (Mathewson).....	1	At Boston
ct. 14—New York (Marquard).....	5	Boston (O'Brien).....	2	At New York
ct. 15—New York (Tesreau).....	11	Boston (Wood).....	4	At Boston
ct. 16—Boston (Wood).....	3	New York (Mathewson).....	2	At Boston (10 inn.)

**1913—PHILADELPHIA A. L. (4) vs. NEW YORK N. L. (1)**

Managers—Connie Mack, Philadelphia; John J. McGraw, New York.

ct. 7—Philadelphia (Bender).....	6	New York (Marquard).....	4	At New York
ct. 8—New York (Mathewson).....	3	Philadelphia (Plank).....	0	At Philadelphia (10 inn.)
ct. 9—Philadelphia (Bush).....	8	New York (Tesreau).....	2	At New York
ct. 10—Philadelphia (Bender).....	6	New York (Demaree).....	5	At Philadelphia
ct. 11—Philadelphia (Plank).....	3	New York (Mathewson).....	1	At New York

**1914—BOSTON N. L. (4) vs. PHILADELPHIA A. L. (0)**

Managers—George T. Stallings, Boston; Connie Mack, Philadelphia.

ct. 9—Boston (Rudolph).....	7	Philadelphia (Bender).....	1	At Philadelphia
ct. 10—Boston (James).....	1	Philadelphia (Plank).....	0	At Philadelphia
ct. 12—Boston (James).....	5	Philadelphia (Bush).....	4	At Boston (12 inn.)
ct. 13—Boston (Rudolph).....	3	Philadelphia (Shawkey).....	1	At Boston

**1915—BOSTON A. L. (4) vs. PHILADELPHIA N. L. (1)**

Managers—William Carrigan, Boston; Patrick J. Moran, Philadelphia.

ct. 8—Philadelphia (Alexander).....	3	Boston (Shore).....	1	At Philadelphia
ct. 9—Boston (Foster).....	2	Philadelphia (Mayer).....	1	At Philadelphia
ct. 11—Boston (Leonard).....	2	Philadelphia (Alexander).....	1	At Boston
ct. 12—Boston (Shore).....	2	Philadelphia (Chalmers).....	1	At Boston
ct. 13—Boston (Foster).....	5	Philadelphia (Rixey).....	4	At Philadelphia

**1916—BOSTON A. L. (4) vs. BROOKLYN N. L. (1)**

Managers—William Carrigan, Boston; Wilbert J. Robinson, Brooklyn.

ct. 7—Boston (Shore).....	6	Brooklyn (Marquard).....	5	At Boston
ct. 9—Boston (Ruth).....	2	Brooklyn (Smith).....	1	At Boston (14 inn.)
ct. 10—Brooklyn (Coombs).....	4	Boston (Mays).....	3	At Brooklyn
ct. 11—Boston (Leonard).....	6	Brooklyn (Marquard).....	2	At Brooklyn
ct. 12—Boston (Shore).....	4	Brooklyn (Pfeffer).....	1	At Boston

**1917—CHICAGO A. L. (4) vs. NEW YORK N. L. (2)**

Managers—Clarence H. Rowland, Chicago; John J. McGraw, New York.

ct. 6—Chicago (Cicotte).....	2	New York (Sallee).....	2	At Chicago
ct. 7—Chicago (Faber).....	7	New York (Anderson).....	2	At Chicago
ct. 10—New York (Benton).....	2	Chicago (Cicotte).....	0	At New York
ct. 11—New York (Schupp).....	5	Chicago (Faber).....	0	At New York
ct. 13—Chicago (Faber).....	8	New York (Sallee).....	5	At Chicago
ct. 15—Chicago (Faber).....	4	New York (Benton).....	2	At New York

**1918—BOSTON A. L. (4) vs. CHICAGO N. L. (2)**

Managers—E. G. Barrow, Boston; Fred L. Mitchell, Chicago.

Sept. 5—Boston (Ruth).....	1	Chicago (Vaughn).....	0	At Chicago
Sept. 6—Chicago (Tyler).....	3	Boston (Bush).....	1	At Chicago
Sept. 7—Boston (Mays).....	2	Chicago (Vaughn).....	1	At Chicago
Sept. 9—Boston (Ruth).....	3	Chicago (Douglas).....	2	At Boston
Sept. 10—Chicago (Vaughn).....	3	Boston (Jones).....	0	At Boston
Sept. 11—Boston (Mays).....	2	Chicago (Tyler).....	1	At Boston

**1919—CINCINNATI N. L. (5) vs. CHICAGO A. L. (3)**

Managers—Patrick J. Moran, Cincinnati; William Gleason, Chicago.

Oct. 1—Cincinnati (Ruether).....	9	Chicago (Cicotte).....	1	At Cincinnati
Oct. 2—Cincinnati (Sallee).....	4	Chicago (Williams).....	2	At Cincinnati
Oct. 3—Chicago (Kerr).....	3	Cincinnati (Fisher).....	0	At Chicago
Oct. 4—Cincinnati (Ring).....	2	Chicago (Cicotte).....	0	At Chicago
Oct. 6—Cincinnati (Eller).....	5	Chicago (Williams).....	0	At Chicago
Oct. 7—Chicago (Kerr).....	5	Cincinnati (Ring).....	4	At Cincinnati
Oct. 8—Chicago (Cicotte).....	4	Cincinnati (Sallee).....	1	At Cincinnati
Oct. 9—Cincinnati (Eller).....	10	Chicago (Williams).....	5	At Chicago (10 inn.)

**1920—CLEVELAND A. L. (5) vs. BROOKLYN N. L. (2)**

Managers—Tris Speaker, Cleveland; Wilbert J. Robinson, Brooklyn.

Oct. 5—Cleveland (Coveleskie).....	3	Brooklyn (Marquard).....	1	At Brooklyn
Oct. 6—Brooklyn (Grimes).....	3	Cleveland (Bagby).....	0	At Brooklyn
Oct. 7—Brooklyn (Smith).....	2	Cleveland (Caldwell).....	1	At Brooklyn
Oct. 9—Cleveland (Coveleskie).....	5	Brooklyn (Cadore).....	1	At Cleveland
Oct. 10—Cleveland (Bagby).....	8	Brooklyn (Grimes).....	1	At Cleveland
Oct. 11—Cleveland (Mails).....	1	Brooklyn (Smith).....	0	At Cleveland
Oct. 12—Cleveland (Coveleskie).....	3	Brooklyn (Grimes).....	0	At Cleveland

**1921—NEW YORK N. L. (5) vs. NEW YORK A. L. (3)**

Managers—John J. McGraw, New York N. L.; Miller J. Huggins, New York A. L.

Oct. 5—New York A (Mays).....	3	New York N (Nehf).....	0	At Polo Grounds
Oct. 6—New York A (Hoyt).....	3	New York N (Douglas).....	0	At Polo Grounds
Oct. 7—New York N (Barnes).....	13	New York A (Quinn).....	5	At Polo Grounds
Oct. 9—New York N (Douglas).....	4	New York A (Mays).....	2	At Polo Grounds
Oct. 10—New York A (Hoyt).....	3	New York N (Nehf).....	1	At Polo Grounds
Oct. 11—New York N (Barnes).....	8	New York A (Shawkey).....	5	At Polo Grounds
Oct. 12—New York N (Douglas).....	2	New York A (Mays).....	1	At Polo Grounds
Oct. 13—New York N (Nehf).....	1	New York A (Hoyt).....	0	At Polo Grounds

**1922—NEW YORK N. L. (4) vs. NEW YORK A. L. (0)**

Managers—John J. McGraw, New York N. L.; Miller J. Huggins, New York A. L.

Oct. 4—New York N (Ryan).....	3	New York A (Bush).....	2	At Polo Grounds
Oct. 5—New York N (tie).....	3	New York A (tie).....	3	At Polo Grounds (10 inn.)
Oct. 6—New York N (Scott).....	3	New York A (Hoyt).....	0	At Polo Grounds
Oct. 7—New York N (McQuillan).....	4	New York A (Mays).....	3	At Polo Grounds
Oct. 8—New York N (Nehf).....	5	New York A (Bush).....	3	At Polo Grounds

**1923—NEW YORK A. L. (4) vs. NEW YORK N. L. (2)**

Managers—Miller J. Huggins, New York A. L.; John J. McGraw, New York N. L.

Oct. 10—New York N (Ryan).....	5	New York A (Bush).....	4	At Yankee Stadium
Oct. 11—New York A (Pennock).....	4	New York N (McQuillan).....	2	At Polo Grounds
Oct. 12—New York N (Nehf).....	1	New York A (Jones).....	0	At Yankee Stadium
Oct. 13—New York A (Shawkey).....	8	New York N (Scott).....	4	At Polo Grounds
Oct. 14—New York A (Bush).....	8	New York N (Bentley).....	1	At Yankee Stadium
Oct. 15—New York A (Pennock).....	6	New York N (Nehf).....	4	At Polo Grounds

**1924—WASHINGTON A. L. (4) vs. NEW YORK N. L. (3)**

Managers—Stanley R. Harris, Washington; John J. McGraw, New York.

Oct. 4—New York (Nehf).....	4	Washington (Johnson).....	3	At Washington (12 inn.)
Oct. 5—Washington (Zachary).....	4	New York (Bentley).....	3	At Washington
Oct. 6—New York (McQuillan).....	6	Washington (Warberry).....	4	At New York
Oct. 7—Washington (Mogridge).....	7	New York (Barnes).....	4	At New York
Oct. 8—New York (Bentley).....	6	Washington (Johnson).....	2	At New York
Oct. 9—Washington (Zachary).....	2	New York (Nehf).....	1	At Washington
Oct. 10—Washington (Johnson).....	4	New York (Bentley).....	3	At Washington (12 inn.)

**1925—PITTSBURGH N. L. (4) vs. WASHINGTON A. L. (3)**

Managers—William B. McKechnie, Pittsburgh; Stanley R. Harris, Washington.

ct. 7—Washington (Johnson).....	4	Pittsburgh (Meadows).....	1	At Pittsburgh
ct. 8—Pittsburgh (Aldridge).....	3	Washington (Coveleskie).....	2	At Pittsburgh
ct. 10—Washington (Ferguson).....	4	Pittsburgh (Kremer).....	3	At Washington
ct. 11—Washington (Johnson).....	4	Pittsburgh (Yde).....	0	At Washington
ct. 12—Pittsburgh (Aldridge).....	6	Washington (Coveleskie).....	3	At Washington
ct. 13—Pittsburgh (Kremer).....	3	Washington (Ferguson).....	2	At Pittsburgh
ct. 15—Pittsburgh (Kremer).....	9	Washington (Johnson).....	7	At Pittsburgh

**1926—ST. LOUIS N. L. (4) vs. NEW YORK A. L. (3)**

Managers—Rogers Hornsby, St. Louis; Miller J. Huggins, New York.

ct. 2—New York (Pennock).....	2	St. Louis (Sherdel).....	1	At New York
ct. 3—St. Louis (Alexander).....	6	New York (Shocker).....	2	At New York
ct. 5—St. Louis (Haines).....	4	New York (Ruether).....	0	At St. Louis
ct. 6—New York (Hoyt).....	10	St. Louis (Reinhart).....	5	At St. Louis
ct. 7—New York (Pennock).....	3	St. Louis (Sherdel).....	2	At St. Louis (10 Inn.)
ct. 9—St. Louis (Alexander).....	10	New York (Shawkey).....	2	At New York
ct. 10—St. Louis (Haines).....	3	New York (Hoyt).....	2	At New York

**1927—NEW YORK A. L. (4) vs. PITTSBURGH N. L. (0)**

Managers—Miller J. Huggins, New York; Owen J. Bush, Pittsburgh.

ct. 5—New York (Hoyt).....	5	Pittsburgh (Kremer).....	4	At Pittsburgh
ct. 6—New York (Pipgras).....	6	Pittsburgh (Aldridge).....	2	At Pittsburgh
ct. 7—New York (Pennock).....	8	Pittsburgh (Meadows).....	1	At New York
ct. 8—New York (McCore).....	4	Pittsburgh (Miljus).....	3	At New York

**1928—NEW YORK A. L. (4) vs. ST. LOUIS N. L. (0)**

Managers—Miller J. Huggins, New York; William B. McKechnie, St. Louis.

ct. 4—New York (Hoyt).....	4	St. Louis (Sherdel).....	1	At New York
ct. 5—New York (Pipgras).....	9	St. Louis (Alexander).....	3	At New York
ct. 7—New York (Zachary).....	7	St. Louis (Haines).....	3	At St. Louis
ct. 9—New York (Hoyt).....	7	St. Louis (Sherdel).....	3	At St. Louis

**1929—PHILADELPHIA A. L. (4) vs. CHICAGO N. L. (1)**

Managers—Connie Mack, Philadelphia; Joseph V. McCarthy, Chicago.

ct. 8—Philadelphia (Ehmke).....	3	Chicago (Root).....	1	At Chicago
ct. 9—Philadelphia (Earnshaw).....	9	Chicago (Malone).....	3	At Chicago
ct. 11—Chicago (Bush).....	3	Philadelphia (Earnshaw).....	1	At Philadelphia
ct. 12—Philadelphia (Rommel).....	10	Chicago (Blake).....	8	At Philadelphia
ct. 14—Philadelphia (Walberg).....	3	Chicago (Malone).....	2	At Philadelphia

**1930—PHILADELPHIA A. L. (4) vs. ST. LOUIS N. L. (2)**

Managers—Connie Mack, Philadelphia; Charles E. Street, St. Louis.

ct. 1—Philadelphia (Grove).....	5	St. Louis (Grimes).....	2	At Philadelphia
ct. 2—Philadelphia (Earnshaw).....	6	St. Louis (Rhem).....	1	At Philadelphia
ct. 4—St. Louis (Hallahan).....	5	Philadelphia (Walberg).....	0	At St. Louis
ct. 5—St. Louis (Haines).....	3	Philadelphia (Grove).....	1	At St. Louis
ct. 6—Philadelphia (Grove).....	2	St. Louis (Grimes).....	0	At St. Louis
ct. 8—Philadelphia (Earnshaw).....	8	St. Louis (Hallahan).....	1	At Philadelphia

**1931—ST. LOUIS N. L. (4) vs. PHILADELPHIA A. L. (3)**

Managers—Charles E. Street, St. Louis; Connie Mack, Philadelphia.

ct. 1—Philadelphia (Grove).....	6	St. Louis (Derringer).....	2	At St. Louis
ct. 2—St. Louis (Hallahan).....	2	Philadelphia (Earnshaw).....	0	At St. Louis
ct. 5—St. Louis (Grimes).....	5	Philadelphia (Grove).....	2	At Philadelphia
ct. 6—Philadelphia (Earnshaw).....	3	St. Louis (Johnson).....	0	At Philadelphia
ct. 7—St. Louis (Hallahan).....	5	Philadelphia (Hoyt).....	1	At Philadelphia
ct. 9—Philadelphia (Grove).....	8	St. Louis (Derringer).....	1	At St. Louis
ct. 10—St. Louis (Grimes).....	4	Philadelphia (Earnshaw).....	2	At St. Louis

**1932—NEW YORK A. L. (4) vs. CHICAGO N. L. (0)**

Managers—Joseph V. McCarthy, New York; Charles J. Grimm, Chicago.

pt. 28—New York (Ruffing).....	12	Chicago (Bush).....	6	At New York
pt. 29—New York (Gomez).....	5	Chicago (Warneke).....	2	At New York
ct. 1—New York (Pipgras).....	7	Chicago (Root).....	5	At Chicago
ct. 2—New York (Moore).....	13	Chicago (May).....	6	At Chicago



**1933—NEW YORK N. L. (4) vs. WASHINGTON A. L. (1)**

Managers—William H. Terry, New York; Joseph E. Cronin, Washington.

Oct. 3—New York (Hubbell).....	4	Washington (Stewart).....	2	At New York
Oct. 4—New York (Schumacher).....	6	Washington (Crowder).....	1	At New York
Oct. 5—Washington (Whitehill).....	4	New York (Fitzsimmons).....	0	At Washington
Oct. 6—New York (Hubbell).....	2	Washington (Weaver).....	1	At Washington (11 inn.)
Oct. 7—New York (Luque).....	4	Washington (Russell).....	3	At Washington (10 inn.)

**1934—ST. LOUIS N. L. (4) vs. DETROIT A. L. (3)**

Managers—Frank F. Frisch, St. Louis; Gordon S. Cochrane, Detroit.

Oct. 3—St. Louis (J. Dean).....	8	Detroit (Crowder).....	3	At Detroit
Oct. 4—Detroit (Rowe).....	3	St. Louis (W. Walker).....	2	At Detroit (12 inn.)
Oct. 5—St. Louis (P. Dean).....	4	Detroit (Bridges).....	1	At St. Louis
Oct. 6—Detroit (Auker).....	10	St. Louis (W. Walker).....	4	At St. Louis
Oct. 7—Detroit (Bridges).....	3	St. Louis (J. Dean).....	1	At St. Louis
Oct. 8—St. Louis (P. Dean).....	4	Detroit (Rowe).....	3	At Detroit
Oct. 9—St. Louis (J. Dean).....	11	Detroit (Auker).....	0	At Detroit

**1935—DETROIT A. L. (4) vs. CHICAGO N. L. (2)**

Managers—Gordon S. Cochrane, Detroit; Charles J. Grimm, Chicago.

Oct. 2—Chicago (Warneke).....	3	Detroit (Rowe).....	0	At Detroit
Oct. 3—Detroit (Bridges).....	8	Chicago (Root).....	3	At Detroit
Oct. 4—Detroit (Rowe).....	6	Chicago (French).....	5	At Chicago (11 inn.)
Oct. 5—Detroit (Crowder).....	2	Chicago (Carleton).....	1	At Chicago
Oct. 6—Chicago (Warneke).....	3	Detroit (Rowe).....	1	At Chicago
Oct. 7—Detroit (Bridges).....	4	Chicago (French).....	3	At Detroit

**1936—NEW YORK A. L. (4) vs. NEW YORK N. L. (2)**

Managers—Joseph V. McCarthy, Yankees; William H. Terry, Giants.

Sept. 30—Giants (Hubbell).....	6	Yankees (Ruffing).....	1	At Polo Grounds
Oct. 2—Yankees (Gomez).....	18	Giants (Schumacher).....	4	At Polo Grounds
Oct. 3—Yankees (Hadley).....	2	Giants (Fitzsimmons).....	1	At Yankee Stadium
Oct. 4—Yankees (Pearson).....	5	Giants (Hubbell).....	2	At Yankee Stadium
Oct. 5—Giants (Schumacher).....	5	Yankees (Malone).....	4	At Yankee Stadium (10 inn.)
Oct. 6—Yankees (Gomez).....	13	Giants (Fitzsimmons).....	5	At Polo Grounds

**1937—NEW YORK A. L. (4) vs. NEW YORK N. L. (1)**

Managers—Joseph V. McCarthy, Yankees; William H. Terry, Giants.

Oct. 6—Yankees (Gomez).....	8	Giants (Hubbell).....	1	At Yankee Stadium
Oct. 7—Yankees (Ruffing).....	8	Giants (Melton).....	1	At Yankee Stadium
Oct. 8—Yankees (Pearson).....	5	Giants (Schumacher).....	1	At Polo Grounds
Oct. 9—Giants (Hubbell).....	7	Yankees (Hadley).....	3	At Polo Grounds
Oct. 10—Yankees (Gomez).....	4	Giants (Melton).....	2	At Polo Grounds

**1938—NEW YORK A. L. (4) vs. CHICAGO N. L. (0)**

Managers—Joseph V. McCarthy, New York; Charles L. Hartnett, Chicago.

Oct. 5—New York (Ruffing).....	3	Chicago (Lee).....	1	At Chicago
Oct. 6—New York (Gomez).....	6	Chicago (Dean).....	3	At Chicago
Oct. 8—New York (Pearson).....	5	Chicago (Bryant).....	2	At New York
Oct. 9—New York (Ruffing).....	8	Chicago (Lee).....	3	At New York

**1939—NEW YORK A. L. (4) vs. CINCINNATI N. L. (0)**

Managers—Joseph V. McCarthy, New York; William B. McKechnie, Cincinnati.

Oct. 4—New York (Ruffing).....	2	Cincinnati (Derringer).....	1	At New York
Oct. 5—New York (Pearson).....	4	Cincinnati (Walters).....	0	At New York
Oct. 7—New York (Hadley).....	7	Cincinnati (Thompson).....	3	At Cincinnati
Oct. 8—New York (Murphy).....	7	Cincinnati (Walters).....	4	At Cincinnati (10 inn.)

**1940—CINCINNATI N. L. (4) vs. DETROIT A. L. (3)**

Managers—William B. McKechnie, Cincinnati; Delmar D. Baker, Detroit.

Oct. 2—Detroit (Newsom).....	7	Cincinnati (Derringer).....	2	At Cincinnati
Oct. 3—Cincinnati (Walters).....	5	Detroit (Rowe).....	3	At Cincinnati
Oct. 4—Detroit (Bridges).....	7	Cincinnati (Turner).....	4	At Detroit
Oct. 5—Cincinnati (Derringer).....	5	Detroit (Trout).....	2	At Detroit
Oct. 6—Detroit (Newsom).....	8	Cincinnati (Thompson).....	0	At Detroit
Oct. 7—Cincinnati (Walters).....	4	Detroit (Rowe).....	0	At Cincinnati
Oct. 8—Cincinnati (Derringer).....	2	Detroit (Newsom).....	1	At Cincinnati

**1941—NEW YORK A. L. (4) vs. BROOKLYN N. L. (1)**

Managers—Joseph V. McCarthy, New York; Leo E. Durocher, Brooklyn.

Oct. 1—New York (Ruffing).....	3	Brooklyn (Davis).....	2	At New York
Oct. 2—Brooklyn (Wyatt).....	3	New York (Chandler).....	2	At New York
Oct. 4—New York (Russo).....	2	Brooklyn (Casey).....	1	At Brooklyn
Oct. 5—New York (Murphy).....	7	Brooklyn (Casey).....	4	At Brooklyn
Oct. 6—New York (Benham).....	3	Brooklyn (Wyatt).....	1	At Brooklyn

**1942—ST. LOUIS N. L. (4) vs. NEW YORK A. L. (1)**

Managers—William H. Southworth, St. Louis; Joseph V. McCarthy, New York.

Sept. 30—New York (Ruffing).....	7	St. Louis (M. Cooper).....	4	At St. Louis
Oct. 1—St. Louis (Beazley).....	4	New York (Bonham).....	3	At St. Louis
Oct. 3—St. Louis (White).....	2	New York (Chandler).....	0	At New York
Oct. 4—St. Louis (Lanier).....	9	New York (Donald).....	6	At New York
Oct. 5—St. Louis (Beazley).....	4	New York (Ruffing).....	2	At New York

**1943—NEW YORK A. L. (4) vs. ST. LOUIS N. L. (1)**

Managers—Joseph V. McCarthy, New York; William H. Southworth, St. Louis.

Oct. 5—New York (Chandler).....	4	St. Louis (Lanier).....	2	At New York
Oct. 6—St. Louis (M. Cooper).....	4	New York (Bonham).....	3	At New York
Oct. 7—New York (Borowy).....	6	St. Louis (Brazle).....	2	At New York
Oct. 10—New York (Russo).....	2	St. Louis (Brecheen).....	1	At St. Louis
Oct. 11—New York (Chandler).....	2	St. Louis (M. Cooper).....	0	At St. Louis

**1944—ST. LOUIS N. L. (4) vs. ST. LOUIS A. L. (2)**

Managers—William H. Southworth, Cardinals; J. Luther Sewell, Browns.

Oct. 4—Browns (Galehouse).....	2	Cardinals (M. Cooper).....	1	At Sportsman's Park
Oct. 5—Cardinals (Donnelly).....	3	Browns (Muncief).....	2	At Sportsman's Pk. (11 inn.)
Oct. 6—Browns (Kramer).....	6	Cardinals (Wilks).....	2	At Sportsman's Park
Oct. 7—Cardinals (Brecheen).....	5	Browns (Jakucki).....	1	At Sportsman's Park
Oct. 8—Cardinals (M. Cooper).....	2	Browns (Galehouse).....	0	At Sportsman's Park
Oct. 9—Cardinals (Lanier).....	3	Browns (Potter).....	1	At Sportsman's Park

**1945—DETROIT A. L. (4) vs. CHICAGO N. L. (3)**

Managers—Stephen F. O'Neill, Detroit; Charles J. Grimm, Chicago.

Oct. 3—Chicago (Borowy).....	9	Detroit (Newhouser).....	0	At Detroit
Oct. 4—Detroit (Trucks).....	4	Chicago (Wyse).....	1	At Detroit
Oct. 5—Chicago (Passeau).....	3	Detroit (Overmire).....	0	At Detroit
Oct. 6—Detroit (Trout).....	4	Chicago (Prim).....	1	At Chicago
Oct. 7—Detroit (Newhouser).....	8	Chicago (Borowy).....	4	At Chicago
Oct. 8—Chicago (Borowy).....	8	Detroit (Trout).....	7	At Chicago (12 inn.)
Oct. 10—Detroit (Newhouser).....	9	Chicago (Borowy).....	3	At Chicago

**1946—ST. LOUIS N. L. (4) vs. BOSTON A. L. (3)**

Managers—Edwin H. Dyer, St. Louis; Joseph E. Cronin, Boston.

Oct. 6—Boston (Johnson).....	3	St. Louis (Pollet).....	2	At St. Louis (10 innings.)
Oct. 7—St. Louis (Brecheen).....	3	Boston (Harris).....	0	At St. Louis
Oct. 9—Boston (Ferriss).....	4	St. Louis (Dickson).....	0	At Boston
Oct. 10—St. Louis (Munger).....	12	Boston (Hughson).....	3	At Boston
Oct. 11—Boston (Dobson).....	6	St. Louis (Brazle).....	3	At Boston
Oct. 13—St. Louis (Brecheen).....	4	Boston (Harris).....	1	At St. Louis
Oct. 15—St. Louis (Brecheen).....	4	Boston (Klinger).....	3	At St. Louis

**1947—NEW YORK A. L. (4) vs. BROOKLYN N. L. (3)**

Managers—Stanley R. Harris, New York; Burton E. Shotton, Brooklyn.

Sept. 30—New York (Shea).....	5	Brooklyn (Branca).....	3	At New York
Oct. 1—New York (Reynolds).....	10	Brooklyn (Lombardi).....	3	At New York
Oct. 2—Brooklyn (Casey).....	9	New York (Newsom).....	8	At Brooklyn
Oct. 3—Brooklyn (Casey).....	3	New York (Bevens).....	2	At Brooklyn
Oct. 4—New York (Shea).....	2	Brooklyn (Barney).....	1	At Brooklyn
Oct. 5—Brooklyn (Branca).....	8	New York (Page).....	6	At New York
Oct. 6—New York (Page).....	5	Brooklyn (Gregg).....	2	At New York

**1948—CLEVELAND A. L. (4) vs. BOSTON N. L. (2)**

Managers—Louis Boudreau, Cleveland; William H. Southworth, Boston.

Oct. 6—Boston (Sain).....	1	Cleveland (Feller).....	0	At Boston
Oct. 7—Cleveland (Lemon).....	4	Boston (Spahn).....	1	At Boston
Oct. 8—Cleveland (Bearden).....	2	Boston (Bickford).....	0	At Cleveland
Oct. 9—Cleveland (Gromek).....	2	Boston (Sain).....	1	At Cleveland
Oct. 10—Boston (Spahn).....	11	Cleveland (Feller).....	5	At Cleveland
Oct. 11—Cleveland (Lemon).....	4	Boston (Voiselle).....	3	At Boston

**1949—NEW YORK A. L. (4) vs. BROOKLYN N. L. (1)**

Managers—Charles D. Stengel, New York; Burton E. Shotton, Brooklyn.

Oct. 5—New York (Reynolds).....	1	Brooklyn (Newcombe).....	0	At New York
Oct. 6—Brooklyn (Roe).....	1	New York (Raschi).....	0	At New York
Oct. 7—New York (Page).....	4	Brooklyn (Branca).....	3	At Brooklyn
Oct. 8—New York (Lopat).....	6	Brooklyn (Newcombe).....	4	At Brooklyn
Oct. 9—New York (Raschi).....	10	Brooklyn (Barney).....	6	At Brooklyn

**1950—NEW YORK A. L. (4) vs. PHILADELPHIA N. L. (0)**

Managers—Charles D. Stengel, New York; Edwin M. Sawyer, Philadelphia.

Oct. 4—New York (Raschi).....	1	Philadelphia (Konstanty).....	0	At Philadelphia
Oct. 5—New York (Reynolds).....	2	Philadelphia (Roberts).....	1	At Philadelphia (10 inn.)
Oct. 6—New York (Ferrick).....	3	Philadelphia (Meyer).....	2	At New York
Oct. 7—New York (Ford).....	5	Philadelphia (Miller).....	2	At New York

**1951—NEW YORK A. L. (4) vs. NEW YORK N. L. (2)**

Managers—Charles D. Stengel, Yankees; Leo E. Durocher, Giants.

Oct. 4—Giants (Koslo).....	5	Yankees (Reynolds).....	1	At Yankee Stadium
Oct. 5—Yankees (Lopat).....	3	Giants (Jansen).....	1	At Yankee Stadium
Oct. 6—Giants (Hearn).....	6	Yankees (Raschi).....	2	At Polo Grounds
Oct. 8—Yankees (Reynolds).....	6	Giants (Maglie).....	2	At Polo Grounds
Oct. 9—Yankees (Lopat).....	13	Giants (Jansen).....	1	At Polo Grounds
Oct. 10—Yankees (Raschi).....	4	Giants (Koslo).....	3	At Yankee Stadium

**1952—NEW YORK A. L. (4) vs. BROOKLYN N. L. (3)**

Managers—Charles D. Stengel, New York; Charles W. Dressen, Brooklyn.

Oct. 1—Brooklyn (Black).....	4	New York (Reynolds).....	2	At Brooklyn
Oct. 2—New York (Raschi).....	7	Brooklyn (Ersikine).....	1	At Brooklyn
Oct. 3—Brooklyn (Roe).....	5	New York (Lopat).....	3	At New York
Oct. 4—New York (Reynolds).....	2	Brooklyn (Black).....	0	At New York
Oct. 5—Brooklyn (Ersikine).....	6	New York (Sain).....	5	At New York (12 inns.)
Oct. 6—New York (Raschi).....	3	Brooklyn (Loes).....	2	At Brooklyn
Oct. 7—New York (Reynolds).....	4	Brooklyn (Black).....	2	At Brooklyn

**1953—NEW YORK A. L. (4) vs. BROOKLYN N. L. (2)**

Managers—Charles D. Stengel, New York; Charles W. Dressen, Brooklyn.

Sept. 30—New York (Sain).....	9	Brooklyn (Labine).....	5	At New York
Oct. 1—New York (Lopat).....	4	Brooklyn (Roe).....	2	At New York
Oct. 2—Brooklyn (Ersikine).....	3	New York (Raschi).....	2	At Brooklyn
Oct. 3—Brooklyn (Loes).....	7	New York (Ford).....	3	At Brooklyn
Oct. 4—New York (McDonald).....	11	Brooklyn (Podres).....	7	At Brooklyn
Oct. 5—New York (Reynolds).....	4	Brooklyn (Labine).....	3	At New York

**1954—NEW YORK N. L. (4) vs. CLEVELAND A. L. (0)**

Managers—Leo E. Durocher, New York; Alfonso R. Lopez, Cleveland.

Sept. 29—New York (Grissom).....	5	Cleveland (Lemon).....	2	At New York
Sept. 30—New York (Antonelli).....	3	Cleveland (Wynn).....	1	At New York
Oct. 1—New York (Gomez).....	6	Cleveland (Garcia).....	2	At Cleveland
Oct. 2—New York (Liddle).....	7	Cleveland (Lemon).....	4	At Cleveland

**1955—BROOKLYN N. L. (4) vs. NEW YORK A. L. (3)**

Managers—Walter Alston, Brooklyn; Charles D. Stengel, New York.

Sept. 28—New York (Ford).....	6	Brooklyn (Newcombe).....	5	At New York
Sept. 29—New York (Byrne).....	4	Brooklyn (Loes).....	2	At New York
Sept. 30—Brooklyn (Podres).....	8	New York (Turley).....	3	At Brooklyn
Oct. 1—Brooklyn (Labine).....	8	New York (Larsen).....	5	At Brooklyn
Oct. 2—Brooklyn (Craig).....	5	New York (Grim).....	3	At Brooklyn
Oct. 3—New York (Ford).....	5	Brooklyn (Spooner).....	1	At New York
Oct. 4—Brooklyn (Podres).....	2	New York (Byrne).....	0	At New York

(For 1956 World Series Statistics see index.)

**.400 HITTERS IN MAJORS**

(Since 1901—100 or more games)

1901—Nap Lajoie.....	422
1911—Ty Cobb.....	420
1911—Joe Jackson.....	408
1912—Ty Cobb.....	410
1920—George Sisler.....	407

1922—George Sisler.....	420
1922—Ty Cobb.....	401
1922—Rogers Hornsby.....	401
1923—Harry Heilmann.....	403
1924—Rogers Hornsby.....	424
1925—Rogers Hornsby.....	403
1930—Bill Terry.....	401
1941—Ted Williams.....	400



## National League Pennant Winners

Year	Club	Manager	Won	Lost	Pct.	Year	Club	Manager	Won	Lost	Pct.
1876	Chicago	Albert G. Spalding	52	14	.788	1916	Brooklyn	Wilbert Robinson	94	60	.610
1877	Boston	Harry Wright	31	17	.646	1917	New York	John J. McGraw	98	56	.636
1878	Boston	Harry Wright	41	19	.683	1918	Chicago	Fred L. Mitchell	84	45	.651
1879	Providence	George Wright	59	25	.702	1919*	Cincinnati	Patrick J. Moran	96	44	.686
1880	Chicago	Adrian C. Anson	67	17	.798	1920	Brooklyn	Wilbert Robinson	93	61	.604
1881	Chicago	Adrian C. Anson	56	28	.667	1921*	New York	John J. McGraw	94	59	.614
1882	Chicago	Adrian C. Anson	55	29	.655	1922*	New York	John J. McGraw	93	61	.604
1883	Boston	John F. Morrill	63	35	.643	1923	New York	John J. McGraw	95	58	.621
1884	Providence	Frank C. Bancroft	84	28	.750	1924	New York	John J. McGraw	93	60	.608
1885	Chicago	Adrian C. Anson	87	25	.777	1925*	Pittsburgh	William B. McKechnie	95	58	.621
1886	Chicago	Adrian C. Anson	90	34	.726	1926*	St. Louis	Rogers Hornsby	89	65	.578
1887	Detroit	W. H. Watkins	79	45	.637	1927	Pittsburgh	Owen J. Bush	94	60	.610
1888	New York	James J. Mutrie	84	47	.641	1928	St. Louis	William B. McKechnie	95	59	.617
1889	New York	James J. Mutrie	83	43	.659	1929	Chicago	Joseph V. McCarthy	98	54	.645
1890	Brooklyn	William H. McGunnigle	86	43	.667	1930	St. Louis	Charles E. Street	92	62	.597
1891	Boston	Frank G. Selee	87	51	.630	1931*	St. Louis	Charles E. Street	101	53	.656
1892	Boston	Frank G. Selee	102	48	.680	1932	Chicago	Charles J. Grimm	90	64	.584
1893	Boston	Frank G. Selee	86	43	.667	1933*	New York	William H. Terry	91	61	.599
1894	Baltimore	Edward H. Hanlon	89	39	.695	1934*	St. Louis	Frank F. Frisch	95	58	.621
1895	Baltimore	Edward H. Hanlon	87	43	.669	1935	Chicago	Charles J. Grimm	100	54	.649
1896	Baltimore	Edward H. Hanlon	90	39	.698	1936	New York	William H. Terry	92	62	.597
1897	Boston	Frank G. Selee	93	39	.705	1937	New York	William H. Terry	95	57	.625
1898	Boston	Frank G. Selee	102	47	.685	1938	Chicago	Charles L. Hartnett	89	63	.586
1899	Brooklyn	Edward H. Hanlon	88	42	.677	1939	Cincinnati	William B. McKechnie	97	57	.630
1900	Brooklyn	Edward H. Hanlon	82	54	.603	1940*	Cincinnati	William B. McKechnie	100	53	.654
1901	Pittsburgh	Fred C. Clarke	90	49	.647	1941	Brooklyn	Leo E. Durocher	100	54	.649
1902	Pittsburgh	Fred C. Clarke	103	36	.741	1942*	St. Louis	William H. Southworth	106	51	.688
1903	Pittsburgh	Fred C. Clarke	91	49	.650	1943	St. Louis	William H. Southworth	105	49	.682
1904	New York	John J. McGraw	106	47	.693	1944*	St. Louis	William H. Southworth	105	49	.682
1905*	New York	John J. McGraw	105	48	.686	1945	Chicago	Charles J. Grimm	98	56	.636
1906	Chicago	Frank L. Chance	116	36	.763	1946*	St. Louis	Edwin H. Dyer	98	58	.628
1907*	Chicago	Frank L. Chance	107	45	.704	1947	Brooklyn	Burton E. Shotton	94	60	.610
1908*	Chicago	Frank L. Chance	99	55	.643	1948	Boston	William H. Southworth	91	62	.595
1909*	Pittsburgh	Fred C. Clarke	110	42	.724	1949	Brooklyn	Burton E. Shotton	97	57	.630
1910	Chicago	Frank L. Chance	104	50	.675	1950	Philadelphia	Edwin M. Sawyer	91	63	.591
1911	New York	John J. McGraw	99	54	.647	1951	New York	Leo E. Durocher	98	50	.624
1912	New York	John J. McGraw	103	48	.682	1952	Brooklyn	Charles W. Dressen	96	57	.627
1913	New York	John J. McGraw	101	51	.664	1953	Brooklyn	Charles W. Dressen	99	52	.656
1914*	Boston	George T. Stallings	94	59	.614	1954*	New York	Leo E. Durocher	97	57	.630
1915	Philadelphia	Patrick J. Moran	90	62	.592	1955*	Brooklyn	Walter Alston	98	55	.641

\* World Series winner.

## American League Pennant Winners

1901	Chicago	Clark C. Griffith	83	53	.610	1928*	New York	Miller J. Huggins	101	53	.656
1902	Philadelphia	Connie Mack	83	53	.610	1929*	Philadelphia	Connie Mack	104	46	.693
1903*	Boston	James J. Collins	91	47	.659	1930*	Philadelphia	Connie Mack	102	52	.662
1904	Boston	James J. Collins	95	59	.617	1931	Philadelphia	Connie Mack	107	45	.704
1905	Philadelphia	Connie Mack	92	56	.622	1932*	New York	Joseph V. McCarthy	107	47	.695
1906*	Chicago	Fielder A. Jones	93	58	.616	1933	Washington	Joseph E. Cronin	99	53	.651
1907	Detroit	Hugh A. Jennings	92	58	.613	1934	Detroit	Gordon S. Cochrane	101	53	.656
1908	Detroit	Hugh A. Jennings	90	63	.588	1935*	Detroit	Gordon S. Cochrane	93	58	.616
1909	Detroit	Hugh A. Jennings	98	54	.645	1936*	New York	Joseph V. McCarthy	102	51	.667
1910*	Philadelphia	Connie Mack	102	48	.680	1937*	New York	Joseph V. McCarthy	102	52	.662
1911*	Philadelphia	Connie Mack	101	50	.669	1938*	New York	Joseph V. McCarthy	99	53	.651
1912*	Boston	J. Garland Stahl	105	47	.691	1939*	New York	Joseph V. McCarthy	106	45	.702
1913*	Philadelphia	Connie Mack	96	57	.627	1940	Detroit	Delmar D. Baker	90	64	.584
1914	Philadelphia	Connie Mack	99	53	.651	1941*	New York	Joseph V. McCarthy	101	53	.656
1915*	Boston	William F. Carrigan	101	50	.669	1942	New York	Joseph V. McCarthy	103	51	.669
1916*	Boston	William F. Carrigan	91	63	.591	1943*	New York	Joseph V. McCarthy	98	56	.636
1917	Chicago	Clarence H. Rowland	100	54	.649	1944	St. Louis	James L. Sewell	89	65	.578
1918*	Boston	Edward G. Barrow	75	51	.595	1945*	Detroit	Stephen F. O'Neill	88	57	.575
1919	Chicago	William Gleason	88	52	.629	1946	Boston	Joseph E. Cronin	104	50	.675
1920*	Cleveland	Tris E. Speaker	98	56	.636	1947*	New York	Stanley R. Harris	97	57	.630
1921	New York	Miller J. Huggins	98	55	.641	1948*	Cleveland	Louis Boudreau	97	58	.626
1922	New York	Miller J. Huggins	94	60	.610	1949*	New York	Charles D. Stengel	97	57	.630
1923*	New York	Miller J. Huggins	98	54	.645	1950*	New York	Charles D. Stengel	98	56	.636
1924*	Washington	Stanley R. Harris	92	62	.597	1951*	New York	Charles D. Stengel	98	56	.636
1925	Washington	Stanley R. Harris	96	55	.636	1952*	New York	Charles D. Stengel	95	59	.617
1926	New York	Miller J. Huggins	91	63	.591	1953	New York	Charles D. Stengel	105	49	.682
1927*	New York	Miller J. Huggins	110	44	.714	1954	Cleveland	Alfonso R. Lopez	111	43	.721
					1955	New York	Charles D. Stengel	96	58	.623	

\* World Series winner.

\* World Series winner.

## National League Batting Champions

Year	Avg.	Year	Avg.	Year	Avg.
1876—R. Barnes, Chi.	403	1902—C. H. Beaumont, Pitts.	357	1929—Frank J. O'Doul, Phila.	398
1877—J. L. White, Bos.	385	1903—J. P. Wagner, Pitts.	355	1930—Wm. H. Terry, N. Y.	401
1878—A. Dalrymple, Mil.	356	1904—J. P. Wagner, Pitts.	349	1931—C. J. Hafey, St. L.	349
1879—A. C. Anson, Chi.	407	1905—J. B. Seymour, Cin.	377	1932—F. J. O'Doul, Bklyn.	368
1880—G. F. Gore, Chi.	365	1906—J. P. Wagner, Pitts.	339	1933—C. H. Klein, Phila.	368
1881—A. C. Anson, Chi.	399	1907—J. P. Wagner, Pitts.	350	1934—P. G. Waner, Pitts.	362
1882—D. Brouthers, Buf.	367	1908—J. P. Wagner, Pitts.	354	1935—F. Vaughan, Pitts.	385
1883—D. Brouthers, Buf.	371	1909—J. P. Wagner, Pitts.	339	1936—P. G. Waner, Pitts.	371
1884—J. O'Rourke, Buf.	350	1910—S. N. Magee, Phila.	331	1937—J. M. Medwick, St. L.	371
1885—R. Connor, N. Y.	371	1911—J. P. Wagner, Pitts.	334	1938—E. N. Lombardi, Cin.	348
1886—M. J. Kelly, Chi.	388	1912—H. Zimmerman, Chi.	372	1939—J. R. Mize, St. L.	348
1887—A. C. Anson, Chi.	421	1913—J. Daubert, Bklyn.	350	1940—D. Garms, Pitts.	355
1888—A. C. Anson, Chi.	343	1914—J. Daubert, Bklyn.	329	1941—H. P. Reiser, Bklyn.	341
1889—D. Brouthers, Bos.	373	1915—L. Doyle, N. Y.	320	1942—E. N. Lombardi, Bos.	338
1890—J. Glasscock, N. Y.	336	1916—H. Chase, Cin.	339	1943—S. F. Musial, St. L.	353
1891—W. Hamilton, Phila.	338	1917—E. J. Roush, Cin.	341	1944—F. Walker, Bklyn.	353
1892—C. Childs, Cleve.	335	1918—Z. D. Wheat, Bklyn.	335	1945—P. J. Cavarretta, Chicago	355
1892—D. Brouthers, Bklyn.	335	1919—E. J. Roush, Cin.	321	1946—S. F. Musial, St. L.	363
1893—Hugh Duffy, Bos.	378	1920—Rogers Hornsby, St. L.	370	1947—H. W. Walker, Phila.	363
1894—Hugh Duffy, Bos.	438	1921—Rogers Hornsby, St. L.	397	1948—S. F. Musial, St. L.	374
1895—J. Burkett, Cleve.	423	1922—Rogers Hornsby, St. L.	401	1949—J. R. Robinson, Bklyn.	342
1896—J. Burkett, Cleve.	410	1923—Rogers Hornsby, St. L.	384	1950—S. F. Musial, St. L.	348
1897—W. Keeler, Balt.	432	1924—Rogers Hornsby, St. L.	424	1951—S. F. Musial, St. L.	351
1898—W. Keeler, Balt.	379	1925—Rogers Hornsby, St. L.	403	1952—S. F. Musial, St. Louis.	338
1899—E. J. Delahanty, Phila.	408	1926—Eugene Hargrave, Cin.	353	1953—C. A. Furillo, Bklyn.	344
1900—J. P. Wagner, Pitts.	380	1927—Paul G. Waner, Pitts.	380	1954—Willie Mays, N. Y.	348
1901—J. Burkett, St. L.	382	1928—Rogers Hornsby, Bos.	387	1955—R. Ashburn, Phila.	338

## American League Batting Champions

1901—N. Lajoie, Phila.	422	1920—G. H. Sisler, St. L.	407	1938—J. E. Foxx, Bos.	345
1902—E. J. Delahanty, Wash.	376	1921—H. E. Heilmann, Det.	384	1939—J. P. DiMaggio, N. Y.	38
1903—N. Lajoie, Cleve.	355	1922—G. H. Sisler, St. L.	420	1940—J. P. DiMaggio, N. Y.	353
1904—N. Lajoie, Cleve.	381	1923—H. E. Heilmann, Det.	403	1941—T. S. Williams, Bos.	400
1905—Elmer Flick, Cleve.	306	1924—G. H. Ruth, N. Y.	378	1942—T. S. Williams, Bos.	351
1906—G. Stone, St. L.	358	1925—H. E. Heilmann, Det.	393	1943—L. B. Appling, Chi.	321
1907—T. R. Cobb, Det.	350	1926—H. E. Manush, Det.	378	1944—L. Boudreau, Cleve.	321
1908—T. R. Cobb, Det.	324	1927—H. E. Heilmann, Det.	398	1945—G. H. Stirnweiss, N. Y.	301
1909—T. R. Cobb, Det.	377	1928—L. A. Goslin, Wash.	379	1946—J. B. Vernon, Wash.	351
1910—T. R. Cobb, Det.	385	1929—L. A. Fonseca, Cleve.	369	1947—T. S. Williams, Bos.	341
1911—T. R. Cobb, Det.	420	1930—A. H. Simmons, Phila.	381	1948—T. S. Williams, Bos.	361
1912—T. R. Cobb, Det.	410	1931—A. H. Simmons, Phila.	390	1949—G. C. Kell, Det.	341
1913—T. R. Cobb, Det.	390	1932—D. Alexander, Det.-Bos.	367	1950—W. D. Goodman, Bos.	351
1914—T. R. Cobb, Det.	368	1933—J. E. Foxx, Phila.	356	1951—Ferris Fain, Phila.	341
1915—T. R. Cobb, Det.	369	1934—H. L. Gehrig, N. Y.	363	1952—Ferris Fain, Phila.	321
1916—T. Speaker, Cleve.	386	1935—C. S. Myer, Wash.	349	1953—J. B. Vernon, Wash.	331
1917—T. R. Cobb, Det.	383	1936—L. B. Appling, Chi.	388	1954—R. F. Avila, Cleve.	341
1918—T. R. Cobb, Det.	382	1937—C. L. Gehringer, Det.	371	1955—A. W. Kaline, Det.	341
1919—T. R. Cobb, Det.	384				

World Series Club Standing  
(Through 1955)

	Series	Won	Lost	Pct.
Boston (A) . . . . .	6	5	1	.833
New York (A) . . . . .	21	16	5	.762
St. Louis (N) . . . . .	9	6	3	.667
Cincinnati (N) . . . . .	3	2	1	.667
Cleveland (A) . . . . .	3	2	1	.667
Chicago (A) . . . . .	3	2	1	.667
Philadelphia (A) . . . . .	8	5	3	.625
Boston (N) . . . . .	2	1	1	.500
Pittsburgh (N) . . . . .	4	2	2	.500

New York (N) . . . . .	14	5	9	.35
Washington (A) . . . . .	3	1	2	.33
Detroit (A) . . . . .	7	2	5	.28
Chicago (N) . . . . .	10	2	8	.20
Brooklyn (N) . . . . .	8	1	7	.12
St. Louis (A) . . . . .	1	0	1	.00
Philadelphia (N) . . . . .	2	0	2	.00

## RECAPITULATION

American League . . . . .	10
National League . . . . .	10

## Indians-Yanks Hold Crowd Mark

An all-time regular-season baseball attendance record was set when 84,587 fans paid to see the Indians take a doubleheader from the New York Yankees, 4-1, 3-2, at Cleveland's Municipal Stadium on Sept. 12,

1954. The 1976 non-paying spectators increased the figures to 86,563. The fifth game of the 1948 world series, also held in Cleveland, attracted a paid crowd of 86,288, the all-time high in the sport.

## BASEBALL'S HALL OF FAME

Cooperstown, N. Y.

## Lifetime Records of Immortals

Year elected	Name and playing years	Games	Batting Average	Year elected	Name and playing years	Games	Batting Average
1939	Anson, Adrian C., 1876-97	2253	.339	1945	Robinson, Wilbert, 1886-1902	1316	.280
1955	Baker, F. J., 1908-22	1575	.308	1936	Ruth, G. H. (Babe), 1914-35	2503	.342
1945	Bresnahan, Roger, 1897-1915	1410	.279	1955	Schalk, R. W., 1912-29	1760	.253
1945	Brouthers, Dan, 1879-96	1653	.348	1953	Simmons, Al H., 1924-44	2215	.334
1946	Burkett, Jesse C., 1890-1905	2063	.342	1939	Sisler, George H., 1915-30	2055	.340
1946	Chance, Frank L., 1898-1914	1232	.297	1937	Speaker, T. E., 1907-28	2789	.344
1945	Clarke, Fred C., 1894-1915	2204	.315	1954	Terry, Wm., A., 1924-36	1721	.341
1936	Cobb, Tytus R., 1905-28	3033	.367	1946	Tinker, Joseph B., 1902-16	1641	.264
1947	Cochrane, Gordon S., 1925-37	1482	.320	1948	Traynor, Harold J., 1920-37	1941	.320
1939	Collins, Edward T., 1906-30	2826	.333	1936	Wagner, John P., 1897-1917	2785	.329
1945	Collins, James J., 1895-1908	1718	.294	1953	Wallace, R. J., 1894-1918	2369	.267
1939	Comiskey, C. A., 1882-94	1383	.269	1952	Waner, Paul G., 1926-45	2549	.333
1956	Cronin, J. E., 1928-45	2124	.302	1937	Wright, George, 1876-82	315	.251
1945	Delahanty, E. J., 1888-1903	1825	.346	PITCHERS			
1954	Dickey, Wm. M., 1928-46	1789	.313	Year elected	Name and playing years	Won	Lost
1955	DiMaggio, J. P., 1936-51	1736	.325	1938	Alexander, Grover C., 1911-30	373	208
1945	Duffy, Hugh, 1888-1906	1722	.330	1953	Bender, Charles A., 1907-17	212	128
1946	Evers, John J., 1902-19	1776	.270	1949	Brown, Mordecai, 1903-16	239	131
1939	Ewing, Wm. B., 1880-97	1280	.311	1946	Chesbro, John D., 1899-1909	199	128
1951	Fox, James E., 1925-1945	2317	.325	1953	Dean, Jerome H., 1930-41	150	83
1947	Frisch, Frank F., 1919-37	2311	.316	1946	Griffith, Clark C., 1891-1908	237	140
1939	Gehrig, Louis, 1923-39	2164	.340	1947	Grove, Robert M., 1925-41	300	141
1949	Gehring, Charles L., 1924-42	2323	.321	1947	Hubbell, Carl O., 1928-43	253	154
1956	Greenberg, H. B., 1933-47	1394	.313	1936	Johnson, Walter P., 1907-27	414	276
1955	Hartnett, C. L., 1922-41	1990	.297	1955	Lyons, T. A., 1923-46	260	230
1952	Heilmann, Harry E., 1914-32	2146	.342	1946	McGinnity, Joseph J., 1899-1908	248	141
1942	Hornsby, Rogers, 1915-37	2259	.358	1936	Mathewson, Christopher, 1900-16	373	188
1945	Jennings, H. A., 1891-1908	1264	.314	1949	Nichols, Charles A., 1890-1906	360	202
1939	Keeler, Wm. H., 1892-1910	2124	.345	1948	Pennock, Herbert J., 1912-34	239	161
1954	Kelly, Michael J., 1878-93	1493	.315	1946	Plank, Edward S., 1901-17	324	190
1937	Lajoie, Napoleon, 1896-1916	2475	.339	1939	Radbourne, Charles G., 1880-91	308	191
1946	McCarthy, Thomas, 1884-96	1268	.294	1955	Vance, A. C., 1915-35	197	140
1937	McGraw, John J., 1891-1906	1082	.334	1946	Waddell, George E., 1897-1910	203	143
1954	Maranville, W. J., 1912-35	2670	.258	1946	Walsh, Edward A., 1904-17	195	126
1954	O'Rourke, James, 1876-94	1750	.315	1937	Young, Denton T., 1890-1911	511	315
1951	Ott, Melvin T., 1926-1947	2730	.304				

## SELECTED FOR MERITORIOUS SERVICE

Morgan G. Bulkley, first National League president. B. Bancroft Johnson, first American League president. Henry Chadwick, pioneer writer, statistician. Alexander J. Cartwright, organizer of first baseball club. Albert G. Spalding, early player, founder of sporting goods firm. William A. Cummings, early pitcher credited with originating curve ball. Judge Kenesaw M. Landis, baseball's first commissioner. William Klem, with National League umpiring staff for 46 years. Thomas Connolly, with American League umpiring staff for 52 years. Harry Wright, manager in National League for three decades. Edward G. Barrow, American League manager and executive.

## BABE RUTH'S MAJOR LEAGUE HOME-RUN RECORD

(A) American League; (N) National League

Regular Season				World Series				All-Star Game			
Year	Club	Home runs	Year	Club	Home runs	Year	Club	Home runs	Year	Club	Home runs
14	Boston (A).....	0	1926	New York (A)....	47	1915	Boston (A).....	0	1933	American.....	1
15	Boston (A).....	4	1927	New York (A)....	60	1916	Boston (A).....	0	1934	American.....	0
16	Boston (A).....	3	1928	New York (A)....	54	1918	Boston (A).....	0			
17	Boston (A).....	2	1929	New York (A)....	46	1921	New York (A)....	1		Total.....	1
18	Boston (A).....	11	1930	New York (A)....	49	1922	New York (A)....	0			
19	Boston (A).....	29	1931	New York (A)....	46	1923	New York (A)....	3		Grand total.....	730
20	New York (A)....	54	1932	New York (A)....	41	1926	New York (A)....	4			
21	New York (A)....	59	1933	New York (A)....	34	1927	New York (A)....	2			
22	New York (A)....	35	1934	New York (A)....	22	1928	New York (A)....	3			
23	New York (A)....	41	1935	Boston (N).....	6	1932	New York (A)....	2			
24	New York (A)....	46									
25	New York (A)....	25		Total.....	714		Total.....	15			



## Major League Individual All-Time Records

Highest batting average, season—Hugh Duffy, Boston (N), 1894 .....	438	Most 3-base hits, season—J. Owen Wilson, Pittsburgh (N), 1912 .....	38
Highest batting average (10 or more years)—Ty Cobb, Detroit and Philadelphia (A), 1905-28 .....	367	Most 2-base hits—Tris E. Speaker, Boston, Cleveland, Washington, Philadelphia (A), 1907-28 .....	793
Most years batting over .300—Ty Cobb .....	23	Most 2-base hits, season—Earl W. Webb, Boston (A), 1931 .....	67
Most hits—Ty Cobb .....	4,191	Most singles—Ty Cobb .....	3,055
Most hits, season—George Sisler, St. Louis (A), 1920 .....	257	Most singles, season (modern record)—Lloyd Waner, Pittsburgh (N), 1927 .....	198
Most consecutive hits, game—Wilbert Robinson, Baltimore (N), 1892 .....	7	Most runs—Ty Cobb .....	2,244
Most successive hits—Frank Higgins, Boston (A), 1938; Walt Dropo, Detroit, 1952 .....	12	Most runs batted in—Babe Ruth .....	2,209
Most consecutive games batted safely—Joe DiMaggio, New York (A), May 15 to July 16, 1941, inclusive .....	56	Most runs batted in, season—Hack Wilson, Chicago (N), 1930 .....	190
Most long hits—Babe Ruth, Boston and New York (A), Boston (N), 1914-35 (506 2b, 136 3b, 714 home runs) .....	1,356	Most runs batted in, single game—James L. Bottomley, St. Louis (N) vs. Brooklyn, Sept. 16, 1924 .....	12
Most total bases—Ty Cobb .....	5,863	Most games played—Ty Cobb .....	3,033
Most total bases, season—Babe Ruth, New York (A), 1921 .....	457	Most consecutive games played—Lou Gehrig, New York (A). Streak started June 1, 1925, and stopped May 2, 1939 .....	2,130
Most total bases, game—Joe Adcock, Milwaukee vs. Brooklyn, July 31, 1954 .....	18	Longest service as player—Eddie Collins, Philadelphia and Chicago (A), 1906-30; Bobby Wallace, Cleveland (N), St. Louis (A), St. Louis (N), 1894-1918 .....	25 years
Most home runs—Babe Ruth .....	714	Most times at bat—Ty Cobb .....	11,423
Most home runs, season—Babe Ruth, New York (A), 1927 .....	60	Most bases on balls—Babe Ruth .....	2,055
Most home runs, 1 game—Lowe, Boston (N), 1894; Delahanty, Phila. (N), 1896; Gehrig, N. Y. (A), 1932; Klein, Phila. (N), 1936 (10 innings); Seerey, Chicago (A), 1948 (11 innings); Hodges, Brooklyn, 1950; Adcock, Milwaukee, 1954 .....	4	Most bases on balls, season—Babe Ruth, 1923 .....	170
Most 3-base hits—Sam Crawford, Cincinnati (N), 1899-1902; Detroit (A), 1903-17 .....	312	Most bases on balls, game (modern record)—Jimmy Foxx, Boston (A), 1938 .....	89

## PITCHING

Most games—Cy Young (516 in National League, 390 in American League), 1890-1911 .....	906	Most games won, season (modern record)—Jack Chesbro, New York (A), 1904 .....	4
Most games won—Cy Young, Cleveland (N), 1890-98; St. Louis (N), 1899-1900; Boston (A), 1901-08; Cleveland (A), 1909-11 (part); Boston (N), 1911 (part) .....	511	Most consecutive games won, season—Tim Keefe, New York (N), 1888; Ruth Marquard, New York (N), 1912 .....	9
Most complete games, season—Jack Chesbro, New York (A), 1904 .....	48	Most shutout games—Walter Johnson, Washington (A), 1907-27 .....	1
Most games, season (modern record)—Jim Konstanty, Philadelphia (N), 1950 .....	74	Most shutout games, season—Grover Alexander, Philadelphia (N), 1916 .....	1
Most innings, season—Ed Walsh, Chicago (A), 1908 .....	464	Most consecutive shutout innings—Walter Johnson, 1913 .....	1
Lowest earned-run average, season—Ferdie Schupp, New York (N), 1916 .....	0.90	Most strikeouts—Walter Johnson .....	3,400
Fewest hits in two consecutive games—John Vander Meer, Cincinnati (N), 1938 (both no-hit games) .....	0	Most strikeouts, season (modern record)—Bobby Feller, Cleveland (A), 1946 .....	3
		Most strikeouts in 9 innings (1901 to date)—Bobby Feller, Cleveland (A) vs. Detroit, Oct. 2, 1938 .....	1

## MAJOR LEAGUE STATISTICS

Source: American League and National League Service Bureaus.

lf—Left-field foul line; cf—center field; rf—right-field foul line. (2)—Indicates double-header scheduled.

## American League

Club, nickname and grounds	Distance, feet			Seating	Record	Visiting club	Date
	lf	cf	rf	capacity	attendance		
Baltimore Orioles—Municipal Stadium.....	309	425	309	47,855	46,796	New York (2).....	May 16, 1954
Boston Red Sox—Fenway Park.....	315	420	302	34,824	41,766	New York (2).....	Aug. 12, 1934
Chicago White Sox—Comiskey Park.....	352	415	352	46,550	53,940	New York (night).....	June 8, 1951
Cleveland Indians—Municipal Stadium.....	320	410	320	73,500	84,587	New York (2).....	Sept. 12, 1954
Detroit Tigers—Briggs Stadium.....	340	440	325	52,954	58,369	New York (2).....	July 20, 1947
Kansas City Athletics—Municipal Stadium.....	330	421	353	30,512	33,585	New York (2, night).....	July 24, 1955
New York Yankees—Yankee Stadium.....	301	461	296	67,000	81,841	Boston (2).....	May 30, 1938
Washington Senators—Griffith Stadium.....	350	408	320	29,023	35,563	New York (2).....	July 4, 1936

## National League

Brooklyn Dodgers—Ebbets Field.....	348	403	297	32,111	41,209	New York (2).....	May 30, 1934
Chicago Cubs—Wrigley Field.....	355	400	353	36,755	46,965	Pittsburgh (2).....	May 31, 1948
Cincinnati Redlegs—Crosley Field.....	328	387	342	29,584	36,961	Pittsburgh (2).....	Apr. 27, 1947
Milwaukee Braves—County Stadium.....	320	402	315	43,110	47,604	Cincinnati (2).....	Sept. 3, 1956
New York Giants—Polo Grounds.....	279	480	257	55,000	60,747	Brooklyn (2).....	May 31, 1937
Philadelphia Phillies—Connie Mack Stadium.....	334	468	331	33,166	40,720	Brooklyn (2).....	May 11, 1947
Pittsburgh Pirates—Forbes Field.....	365	457	300	34,249	44,932	Brooklyn.....	Sept. 23, 1956
St. Louis Cardinals—Busch Stadium.....	351	426	310	30,500	45,770	Chicago (2).....	July 12, 1931

## RECORD OF MAJOR LEAGUE ALL-STAR GAMES

Date	Winning league and pitcher	Runs	Losing league and pitcher	Runs	Where held	Paid attendance	Receipts
July 6, 1933	American (Gomez).....	4	National (Hallahan).....	2	Chicago (A).....	49,200	\$ 51,203.50
July 10, 1934	American (Harder).....	9	National (Mungo).....	7	New York (N).....	48,363	52,982.00*
July 8, 1935	American (Gomez).....	4	National (Walker).....	1	Cleveland (A).....	69,812	82,179.12
July 7, 1936	National (J. Dean).....	4	American (Grove).....	3	Boston (N).....	25,556	24,583.80
July 7, 1937	American (Gomez).....	8	National (J. Dean).....	3	Washington (A).....	31,391	28,475.18
July 6, 1938	National (Vander Meer).....	4	American (Gomez).....	1	Cincinnati (N).....	27,067	38,469.05
July 11, 1939	American (Bridges).....	3	National (Lee).....	1	New York (A).....	62,892	75,701.00
July 9, 1940	National (Derringer).....	4	American (Ruffing).....	0	St. Louis (N).....	32,373	36,723.03
July 8, 1941	American (Smitn).....	7	National (Passeau).....	5	Detroit (A).....	54,674	63,267.08
July 6, 1942	American (Chandler).....	3	National (M. Cooper).....	1	New York (N).....	33,694	86,102.98
July 13, 1943	American (Leonard).....	5	National (M. Cooper).....	3	Philadelphia (A).....	31,938	65,674.00†
July 11, 1944	National (Raffensberger).....	7	American (Hughson).....	1	Pittsburgh (N).....	29,589	81,275.00†
July 9, 1946	American (Feller).....	12	National (Passeau).....	0	Boston (A).....	34,906	89,071.00
July 8, 1947	American (Shea).....	2	National (Sain).....	1	Chicago (N).....	41,123	105,314.90
July 13, 1948	American (Raschi).....	5	National (Schmitz).....	2	St. Louis (A).....	34,009	93,447.00
July 12, 1949	American (Trucks).....	11	National (Newcombe).....	7	Brooklyn (N).....	32,577	79,225.07
July 11, 1950	(a) National (Blackwell).....	4	American (Gray).....	3	Chicago (A).....	46,127	126,179.52
July 10, 1951	National (Maglie).....	8	American (Lopat).....	3	Detroit (A).....	52,075	124,294.01
July 8, 1952	National (Rush).....	3	American (Lemon).....	2	Philadelphia (N).....	32,785	108,762.00
July 14, 1953	National (Spahn).....	5	American (Reynolds).....	1	Cincinnati (N).....	30,846	155,654.00
July 13, 1954	American (Stone).....	11	National (Conley).....	9	Cleveland (A).....	68,751	259,204.00
July 12, 1955	(b) National (Conley).....	6	American (Sullivan).....	5	Milwaukee (N).....	45,314	179,545.50

\* An additional \$5,175 was received for radio rights. † Additional funds were received from other sources. (a) Fourteen innings. (b) Twelve innings.

## MOST VALUABLE PLAYERS

(Baseball Writers' Association selections)

## American League

1931—Robert Grove, Philadelphia
1932—James Fox, Philadelphia
1933—James Fox, Philadelphia
1934—Gordon Cochrane, Detroit
1935—Henry Greenberg, Detroit
1936—Lou Gehrig, New York
1937—Charles Gehrig, Detroit
1938—James Fox, Boston
1939—Joe DiMaggio, New York
1940—Henry Greenberg, Detroit
1941—Joe DiMaggio, New York
1942—Joe Gordon, New York
1943—Spurgeon Chandler, New York
1944—Harold Newhouser, Detroit
1945—Harold Newhouser, Detroit
1946—Ted Williams, Boston
1947—Joe DiMaggio, New York
1948—Lou Boudreau, Cleveland
1949—Ted Williams, Boston
1950—Phil Rizzuto, New York
1951—Lawrence Berra, New York
1952—Robert Shantz, Philadelphia
1953—Al Rosen, Cleveland
1954—Lawrence Berra, New York
1955—Lawrence Berra, New York

## National League

1931—Frank Frisch, St. Louis
1932—Charles Klein, Philadelphia
1933—Carl Hubbell, New York
1934—Jerome Dean, St. Louis
1935—Charles Hartnett, Chicago
1936—Carl Hubbell, New York
1937—Joseph Medwick, St. Louis
1938—Ernest Lombardi, Cincinnati
1939—William Walter, Cincinnati
1940—Frank McCormick, Cincinnati
1941—Adolph Camilli, Brooklyn
1942—Morton Cooper, St. Louis
1943—Stanley Musial, St. Louis
1944—Marty Marion, St. Louis
1945—Phil Cavarretta, Chicago
1946—Stanley Musial, St. Louis
1947—Robert Elliott, Boston
1948—Stanley Musial, St. Louis
1949—Jackie Robinson, Brooklyn
1950—Jim Konstanty, Philadelphia
1951—Roy Campanella, Brooklyn
1952—Henry Sauer, Chicago
1953—Roy Campanella, Brooklyn
1954—Willie Mays, New York
1955—Roy Campanella, Brooklyn





## GOLF

IT MAY BE that golf originated in Holland—historians believe it did—but certainly Scotland fostered the game and is famous for it. In fact, in 1457 the Scottish Parliament, disturbed because football and golf had lured young Scots from the more soldierly exercise of archery, passed an ordinance that "futeball and golf be utterly cryit down and nocht usit". James I and Charles I of the royal line of Stuarts were golf enthusiasts, whereby the game came to be known as "the royal and ancient game of golf".

The golf balls used in the early games were leather covered and stuffed with feathers. Clubs of all kinds were fashioned by hand to suit individual players. The great step in spreading the game came with the change from the feather ball to the gutta-percha ball about 1850, and in 1860 formal competition began with the establishment of an annual tournament for the British open championship. There are records of "golf clubs" in the United

States as far back as colonial days but no proof of actual play before John Reid and some friends laid out six holes on the Reid lawn in Yonkers, N. Y., in 1888 and played there with the golf balls and clubs brought over from Scotland by Robert Lockhart. This group then formed the St. Andrews Golf Club of Yonkers, and golf was established in this country.

However, it remained a rather sedate and almost aristocratic pastime until a 20-year-old ex-caddy, Francis Ouimet of Boston, defeated two great British professionals, Harry Vardon and Ted Ray, in the United States Open championship at Brookline, Mass., in 1913. This feat put the game and Francis Ouimet on the front pages of the newspapers and stirred a wave of enthusiasm for the sport. The greatest feat so far in golf history was that of Robert Tyre Jones, Jr. of Atlanta, Ga., in winning the British Open, the British Amateur, the U. S. Open and the U. S. Amateur titles in one year, 1930.

## Golf Statistics

Source: United States Golf Association.

## UNITED STATES OPEN CHAMPIONS

Year	Winner	Score	Where played	Year	Winner	Score	Where played
1895	Horace Rawlins.....	173	Newport	1925	W. Macfarlane (a).....	291	Worcester
1896	James Foulis.....	152	Shinnecock Hills	1926	R. T. Jones, Jr.(b).....	293	Scioto
1897	Joe Lloyd.....	162	Chicago	1927	Tommy Armour (a).....	301	Oakmont
1898*	Fred Herd.....	328	Myopia	1928	Johnny Farrell (a).....	294	Olympia Fields
1899	Willie Smith.....	315	Baltimore	1929	R. T. Jones, Jr.(a,b)....	294	Winged Foot
1900	Harry Vardon.....	313	Chicago	1930	R. T. Jones, Jr.(b).....	287	Interlachen
1901	Willie Anderson (a).....	331	Myopia	1931	Billy Burke (a).....	292	Inverness
1902	L. Auchterlonie.....	307	Garden City	1932	Gene Sarazen.....	286	Fresh Meadow
1903	Willie Anderson (a).....	307	Baltusrol	1933	John Goodman (b).....	287	North Shore
1904	Willie Anderson.....	303	Glen View	1934	Olin Dutra.....	293	Merion
1905	Willie Anderson.....	314	Myopia	1935	Sam Parks, Jr.....	299	Oakmont
1906	Alex Smith.....	295	Onwentsia	1936	Tony Manero.....	282	Baltusrol
1907	Alex Ross.....	302	Philadelphia	1937	Ralph Guldahl.....	281	Oakland Hills
1908	Fred McLeod (a).....	322	Myopia	1938	Ralph Guldahl.....	284	Cherry Hills
1909	George Sargent.....	290	Englewood	1939	Byron Nelson (a).....	284	Philadelphia
1910	Alex Smith (a).....	298	Philadelphia	1940	W. Lawson Little, Jr.(a)..	287	Canterbury
1911	J. J. McDermott (a).....	307	Chicago	1941	Craig Wood.....	284	Colonial
1912	J. J. McDermott.....	294	Buffalo	1942-45	No tournaments†		
1913	Francis Ouimet (a,b)....	304	Brookline	1946	Lloyd Mangrum (a).....	284	Canterbury
1914	Walter Hagen.....	290	Midlothian	1947	Lew Worsham (a).....	282	St. Louis
1915	Jerome D. Travers (b)...	297	Baltusrol	1948	Ben Hogan.....	276	Riviera
1916	Charles Evans, Jr.(b)....	286	Minikahda	1949	Cary Middlecoff.....	286	Medinah
1917-18	No tournaments†			1950	Ben Hogan (a).....	287	Merion
1919	Walter Hagen (a).....	301	Brae Burn	1951	Ben Hogan.....	287	Oakland Hills
1920	Edward Ray.....	295	Inverness	1952	Julius Boros.....	281	Northwood
1921	James M. Barnes.....	289	Columbia	1953	Ben Hogan.....	283	Oakmont
1922	Gene Sarazen.....	288	Skokie	1954	Ed Furgol.....	284	Baltusrol
1923	R. T. Jones, Jr.(a,b)....	296	Inwood	1955	Jack Fleck (a).....	287	Olympic
1924	Cyril Walker.....	297	Oakland Hills				

(a) Won play-off. (b) Amateur. \* In 1898 competition was extended to 72 holes. † In 1917, Jock Hutchison, 19th a 292, won an Open Patriotic Tournament for the benefit of the American Red Cross at Whitmarsh Valley Country Club. ‡ In 1942, Ben Hogan, with a 271, won a Hale American National Open Tournament for the benefit of the Navy Relief Society and USO at Ridgemoor Country Club.

## UNITED STATES AMATEUR CHAMPIONS

Year	Winner	Where played	Year	Winner	Where played
1895	Charles B. Macdonald.....	Newport	1925	R. T. Jones, Jr.....	Oakmont
1896	H. J. Whigham.....	Shinnecock Hills	1926	George Von Elm.....	Baltusrol
1897	H. J. Whigham.....	Chicago	1927	R. T. Jones, Jr.....	Minikahda
1898	Findlay S. Douglas.....	Morris County	1928	R. T. Jones, Jr.....	Brae Burn
1899	H. M. Harriman.....	Onwentsia	1929	H. R. Johnston.....	Del Monte
1900	Walter J. Travis.....	Garden City	1930	R. T. Jones, Jr.....	Merion
1901	Walter J. Travis.....	Atlantic City	1931	Francis Ouimet.....	Beverly
1902	Louis N. James.....	Glen View	1932	C. R. Somerville.....	Baltimore
1903	Walter J. Travis.....	Nassau	1933	G. T. Dunlap, Jr.....	Kenwood
1904	H. Chandler Egan.....	Baltusrol	1934	W. Lawson Little, Jr.....	Brookline
1905	H. Chandler Egan.....	Chicago	1935	W. Lawson Little, Jr.....	Cleveland
1906	Eben M. Byers.....	Englewood	1936	John W. Fischer.....	Garden City
1907	Jerome D. Travers.....	Euclid	1937	John Goodman.....	Alderwood
1908	Jerome D. Travers.....	Garden City	1938	Willie Turnesa.....	Oakmont
1909	Robert A. Gardner.....	Chicago	1939	Marvin H. Ward.....	North Shore
1910	W. C. Fownes, Jr.....	Brookline	1940	R. D. Chapman.....	Winged Foot
1911	Harold H. Hilton.....	Apawamis	1941	Marvin H. Ward.....	Omaha
1912	Jerome D. Travers.....	Chicago	1946	Ted Bishop.....	Baltusrol
1913	Jerome D. Travers.....	Garden City	1947	Robert Riegel.....	Del Monte
1914	Francis Ouimet.....	Ekwanok	1948	Willie Turnesa.....	Memphis
1915	Robert A. Gardner.....	Detroit	1949	Charles Coe.....	Oak Hill
1916	Charles Evans, Jr.....	Merion	1950	Sam Urzetta.....	Minneapolis
1919	S. D. Herron.....	Oakmont	1951	Billy Maxwell.....	Saucon Valley
1920	Charles Evans, Jr.....	Engineers'	1952	Jack Westland.....	Seattle
1921	Jesse P. Guilford.....	St. Louis	1953	Gene Littler.....	Okl. City
1922	Jess W. Sweetser.....	Brookline	1954	Arnold Palmer.....	Detroit
1923	Max R. Marston.....	Flossmoor	1955	Harvie Ward.....	Richmond
1924	R. T. Jones, Jr.....	Merion			

## UNITED STATES WOMEN AMATEUR CHAMPIONS

1895	Mrs. C. S. Brown.....	Meadow Brook	1925	Glenna Collett.....	St. Louis
1896	Beatrice Hoyt.....	Morris County	1926	Mrs. G. H. Stetson.....	Merion
1897	Beatrice Hoyt.....	Essex (Mass.)	1927	Mrs. M. B. Horn.....	Cherry Valley
1898	Beatrice Hoyt.....	Asdley	1928	Glenna Collett.....	Hot Springs (Va.)
1899	Ruth Underhill.....	Philadelphia	1929	Glenna Collett.....	Oakland Hills
1900	Frances C. Griscom.....	Shinnecock Hills	1930	Glenna Collett.....	Los Angeles
1901	Genevieve Hecker.....	Baltusrol	1931	Helen Hicks.....	Buffalo
1902	Genevieve Hecker.....	Brookline	1932	Virginia Van Wie.....	Salem
1903	Bessie Anthony.....	Chicago	1933	Virginia Van Wie.....	Exmoor
1904	G. M. Bishop.....	Merion	1934	Virginia Van Wie.....	Whitemarsh Valley
1905	Pauline Mackay.....	Morris County	1935	Mrs. E. H. Vare, Jr.....	Interlachen
1906	Harriot S. Curtis.....	Brae Burn	1936	Pamela Barton.....	Canoe Brook
1907	Margaret Curtis.....	Midlothian	1937	Mrs. J. A. Page, Jr.....	Memphis
1908	K. C. Harley.....	Chevy Chase	1938	Patty Berg.....	Westmoreland
1909	D. I. Campbell.....	Merion	1939	Betty Jameson.....	Wee Burn
1910	D. I. Campbell.....	Homewood	1940	Betty Jameson.....	Del Monte
1911	Margaret Curtis.....	Baltusrol	1941	Mrs. Frank Newell.....	Brookline
1912	Margaret Curtis.....	Essex (Mass.)	1946	Mrs. M. D. Zaharias.....	Tulsa
1913	Gladys Ravenscroft.....	Wilmington	1947	Louise Suggs.....	Franklin Hills
1914	Mrs. H. A. Jackson.....	Nassau	1948	Grace Lenczyk.....	Pebble Beach
1915	Mrs. C. H. Vanderbeck.....	Onwentsia	1949	Mrs. D. G. Porter.....	Merion
1916	Alexa Stirling.....	Belmont Springs	1950	Beverly Hanson.....	East Lake
1919	Alexa Stirling.....	Shawnee	1951	Dorothy Kirby.....	Town and Country
1920	Alexa Stirling.....	Mayfield	1952	Mrs. Jacqueline Pung.....	Waverly
1921	Marion Hollins.....	Hollywood (N. J.)	1953	Mary Lena Faulk.....	Rhode Island
1922	Glenna Collett.....	Greenbrier	1954	Barbara Romack.....	Sewickley
1923	Edith Cummings.....	Westchester-Biltmore	1955	Patricia Lesser.....	Myers Park
1924	Mrs. D. C. Hurd.....	Rhode Island			

## U. S. PUBLIC LINKS CHAMPIONS

1922—Edmund R. Held	1934—David A. Mitchell	1947—Wilfred Crossley
1923—Richard J. Walsh	1935—Frank Strafaci	1948—Michael R. Ferentz
1924—Joseph Coble	1936—B. Patrick Abbott	1949—Ken Towns
1925—R. J. McLaughlin	1937—Bruce N. McCormick	1950—Stan Bielat
1926—Leser Bolstad	1938—Al Leach	1951—Dave Stanley
1927—29—C. F. Kauffmann	1939—Andrew Szwedko	1952—Omer L. Bogan
1930—Robert E. Wingate	1940—Robert C. Clark	1953—Ted Richards
1931—Charles Ferrara	1941—William M. Welch	1954—Gene Andrews
1932—R. L. Miller	1942-45—No competition	1955—Sam Kocsis
1933—Charles Ferrara	1946—Smiley Quick	

## UNITED STATES P. G. A. CHAMPIONS

Year	Winner	Where played	Year	Winner	Where played
1916	Jim Barnes	Siwanoy, N. Y.	1936	Denny Shute	Pinehurst, N. C.
1919	Jim Barnes	Engineers, L. I.	1937	Denny Shute	Pittsburgh, Pa.
1920	Jock Hutchison	Flossmoor, Ill.	1938	Paul Runyan	Shawnee-on-Delaware, Pa.
1921	Walter Hagen	Inwood, L. I.	1939	Henry Picard	Pomonoak, L. I.
1922	Gene Sarazen	Oakmont, Pa.	1940	Byron Nelson	Hershey, Pa.
1923	Gene Sarazen	Pelham, N. Y.	1941	Victor Ghezzi	Denver, Colo.
1924	Walter Hagen	French Lick, Ind.	1942	Sam Snead	Atlantic City, N. J.
1925	Walter Hagen	Olympia Fields, Ill.	1944	Bob Hamilton	Spokane, Wash.
1926	Walter Hagen	Salisbury, L. I.	1945	Byron Nelson	Dayton, Ohio
1927	Walter Hagen	Dallas, Texas	1946	Ben Hogan	Portland, Oreg.
1928	Leo Diegel	Baltimore, Md.	1947	Jim Ferrier	Plum Hollow, Mich.
1929	Leo Diegel	Hillcrest, Calif.	1948	Ben Hogan	St. Louis, Mo.
1930	Tommy Armour	Fresh Meadow, L. I.	1949	Sam Snead	Richmond, Va.
1931	Tom Creavy	Wannamoisett, R. I.	1950	Chandler Harper	Columbus, Ohio
1932	Olin Dutra	Keller Course, Minn.	1951	Sam Snead	Oakmont, Pa.
1933	Gene Sarazen	Blue Mound, Wis.	1952	Jim Turnesa	Louisville, Ky.
1934	Paul Runyan	Park Club, Buffalo	1953	Walter Burkemo	Birmingham, Mich.
1935	Johnny Revolta	Twin Hills, Okla.	1954	Chick Harbert	Keller Course
			1955	Doug Ford	Meadowbrook

## BRITISH OPEN CHAMPIONS

Year	Winner	Score	Where played	Year	Winner	Score	Where played
1860	W. Park	174	Prestwick	1903	Harry Vardon	300	Prestwick
1861	Tom Morris, Sr.	163	Prestwick	1904	Jack White	296	Sandwich
1862	Tom Morris, Sr.	163	Prestwick	1905	James Braid	318	St. Andrews
1863	W. Park	168	Prestwick	1906	James Braid	300	Muirfield
1864	Tom Morris, Sr.	167	Prestwick	1907	Arnaud Massy	312	Hoylake
1865	A. L. Strath	162	Prestwick	1908	James Braid	291	Prestwick
1866	W. Park	169	Prestwick	1909	J. H. Taylor	295	Deal
1867	Tom Morris, Sr.	170	Prestwick	1910	James Braid	299	St. Andrews
1868	Tom Morris, Jr.	170	Prestwick	1911	Harry Vardon (a)	303	Sandwich
1869	Tom Morris, Jr.	154	Prestwick	1912	E. Ray	295	Muirfield
1870	Tom Morris, Jr.	149	Prestwick	1913	J. H. Taylor	304	Hoylake
1872	Tom Morris, Jr.	166	Prestwick	1914	Harry Vardon	306	Prestwick
1873	Tom Kidd	179	St. Andrews	1920	George Duncan	303	Deal
1874	Mungo Park	159	Musselburgh	1921	Jock Hutchison (a)	296	St. Andrews
1875	Willie Park	166	Prestwick	1922	Walter Hagen	300	Sandwich
1876	Bob Martin	176	St. Andrews	1923	A. G. Havers	295	Troon
1877	Jamie Anderson	160	Musselburgh	1924	Walter Hagen	301	Hoylake
1878	Jamie Anderson	157	Prestwick	1925	Jim Barnes	300	Prestwick
1879	Jamie Anderson	170	St. Andrews	1926	R. T. Jones, Jr.	291	Royal Lytham, St. Annes
1880	Bob Ferguson	162	Musselburgh	1927	R. T. Jones, Jr.	285	St. Andrews
1881	Bob Ferguson	170	Prestwick	1928	Walter Hagen	292	Sandwich
1882	Bob Ferguson	171	St. Andrews	1929	Walter Hagen	292	Muirfield
1883	W. L. Fernie (a)	159	Musselburgh	1930	R. T. Jones, Jr.	291	Hoylake
1884	Jack Simpson	160	Prestwick	1931	T. D. Armour	296	Carnoustie
1885	Bob Martin	171	St. Andrews	1932	G. Sarazen	283	Princes, Sandwich
1886	D. L. Brown	157	Musselburgh	1933	D. Shute (a)	292	St. Andrews
1887	W. Park, Jr.	161	Prestwick	1934	T. H. Cotton	283	Sandwich
1888	Jack Burns	171	St. Andrews	1935	A. Perry	283	Muirfield
1889	W. Park, Jr. (a)	155	Musselburgh	1936	A. H. Padgham	287	Royal Liverpool
1890	John Ball	164	Prestwick	1937	T. H. Cotton	290	Carnoustie
1891	Hugh Kirkaldy	166	St. Andrews	1938	R. A. Whitcombe	295	Sandwich
1892*	H. H. Hilton	305	Muirfield	1939	R. Burton	290	St. Andrews
1893	W. Auchterlonie	322	Prestwick	1946	Sam Snead	290	St. Andrews
1894	J. H. Taylor	326	Sandwich	1947	Fred Daly	293	Hoylake
1895	J. H. Taylor	322	St. Andrews	1948	Henry Cotton	284	Gullane, Muirfield
1896	Harry Vardon (a)	316	Muirfield	1949	Bobby Locke (a)	283	Sandwich, Deal
1897	H. H. Hilton	314	Hoylake	1950	Bobby Locke	279	Troon, Lochgreen
1898	Harry Vardon	307	Prestwick	1951	Max Faulkner	285	Portrush
1899	Harry Vardon	310	Sandwich	1952	Bobby Locke	287	Royal Lytham, St. Annes
1900	J. H. Taylor	309	St. Andrews	1953	Ben Hogan	282	Carnoustie
1901	James Braid	309	Muirfield	1954	Peter Thomson	283	Southport
1902	Alex Herd	307	Hoylake	1955	Peter Thomson	281	St. Andrews

(a) Won play-off. \* In 1892 competition was extended to 72 holes.

## WOMEN'S NATIONAL OPEN CHAMPIONS

1946—Patty Berg (match play)	—	1951—Betsy Rawls	293
1947—Betty Jameson	295	1952—Louise Suggs	284
1948—Mrs. Mildred D. Zaharias	300	1953—Betsy Rawls	302
1949—Louise Suggs	291	1954—Mrs. Mildred D. Zaharias	291
1950—Mrs. Mildred D. Zaharias	291	1955—Fay Crocker	299



## BRITISH AMATEUR CHAMPIONS

Year	Winner	Where played	Year	Winner	Where played
1885	A. F. MacFie	Hoylake	1920	Cyril J. H. Tolley	Muirfield
1886	H. G. Hutchinson	St. Andrews	1921	W. I. Hunter	Hoylake
1887	H. G. Hutchinson	Hoylake	1922	E. W. E. Holderness	Prestwick
1888	John Ball	Prestwick	1923	R. H. Wethered	Deal
1889	J. E. Laidlay	St. Andrews	1924	E. W. E. Holderness	St. Andrews
1890	John Ball	Hoylake	1925	Robert Harris	Westward Ho
1891	J. E. Laidlay	St. Andrews	1926	Jess W. Sweetser	Muirfield
1892	John Ball	Sandwich	1927	Dr. W. Tweddell	Hoylake
1893	Peter L. Anderson	Prestwick	1928	T. P. Perkins	Prestwick
1894	John Ball	Hoylake	1929	C. J. H. Tolley	Sandwich
1895	L. M. B. Melville	St. Andrews	1930	R. T. Jones, Jr.	St. Andrews
1896	F. G. Tait	Sandwich	1931	E. Martin Smith	Westward Ho
1897	A. J. T. Allan	Muirfield	1932	J. De Forest	Muirfield
1898	F. G. Tait	Hoylake	1933	Hon. M. Scott	Hoylake
1899	John Ball	Prestwick	1934	W. Lawson Little, Jr.	Prestwick
1900	H. H. Hilton	Sandwich	1935	W. Lawson Little, Jr.	Royal Lytham, St. Annes
1901	H. H. Hilton	St. Andrews	1936	H. Thomson	St. Andrews
1902	C. Hutchings	Hoylake	1937	R. Sweeney, Jr.	Sandwich
1903	R. Maxwell	Muirfield	1938	C. R. Yates	Troon
1904	W. J. Travis	Sandwich	1939	A. Kyle	Hoylake
1905	A. G. Barriv	Prestwick	1946	J. Bruen	Birkdale
1906	James Robb	Hoylake	1947	Willie Turnesa	Carnoustie
1907	John Ball	St. Andrews	1948	Frank Stranahan	Sandwich
1908	E. A. Lassen	Sandwich	1949	Max McCready	Portmarnock
1909	R. Maxwell	Muirfield	1950	Frank Stranahan	St. Andrews
1910	John Ball	Hoylake	1951	Richard D. Chapman	Porthcawl
1911	H. H. Hilton	Prestwick	1952	Harvie Ward	Prestwick
1912	John Ball	Westward Ho	1953	Joe Carr	Hoylake
1913	H. H. Hilton	St. Andrews	1954	Doug Bachli	Gullane
1914	J. L. C. Jenkins	Sandwich	1955	Lt. Joe Conrad	Royal Lytham, St. Annes

## Intercollegiate Golf Association of America Champions

Year	Individual	Team	Year	Individual	Team
1897	Louis P. Bayard, Jr., Princeton	Yale	1917-18	No tournaments	
1898*	John Reid, Jr., Yale	Harvard	1919	A. L. Walker, Jr., Columbia	Princeton
	James F. Curtis, Harvard	Yale	1920	Jess W. Sweetser, Yale	Princeton
1899	Percy Pyne, 2d, Princeton	Harvard	1921	J. Simpson Dean, Princeton	Dartmouth
1900	No tournament		1922	Pollack Boyd, Dartmouth	Princeton
1901	H. Lindsley, Harvard	Harvard	1923	Dexter Cummings, Yale	Princeton
1902*	Charles Hitchcock, Jr., Yale	Yale	1924	Dexter Cummings, Yale	Yale
	H. Chandler Egan, Harvard	Harvard	1925	G. Fred Lamprecht, Tulane	Yale
1903	F. O. Reinhart, Princeton	Harvard	1926	G. Fred Lamprecht, Tulane	Yale
1904	A. L. White, Harvard	Harvard	1927	Watts Gunn, Georgia Tech.	Princeton
1905	Robert Abbott, Yale	Yale	1928	M. J. McCarthy, Jr., Georgetown	Princeton
1906	W. E. Clow, Jr., Yale	Yale	1929	Tom Aycock, Yale	Princeton
1907	Ellis Knowles, Yale	Yale	1930	George T. Dunlap, Jr., Princeton	Princeton
1908	H. H. Wilder, Harvard	Yale	1931	George T. Dunlap, Jr., Princeton	Yale
1909	Albert Seckel, Princeton	Yale	1932	John W. Fischer, Jr., Michigan	Yale
1910	Robert E. Hunter, Yale	Yale	1933	Walter Emery, Oklahoma	Yale
1911	George C. Stanley, Yale	Yale	1934	Charles R. Yates, Georgia Tech.	Michigan
1912	F. C. Davison, Harvard	Yale	1935	Ed White, U. of Texas	Michigan
1913	Nathaniel Wheeler, Yale	Yale	1936	Charles Kocsis, Michigan	Yale
1914	Edward P. Allis, 3d, Harvard	Princeton	1937	Fred Haas, Jr., L. S. U.	Princeton
1915	Francis R. Blossom, Yale	Yale	1938	John P. Burke, Georgetown	Stanford
1916	J. W. Hubbell, Harvard	Princeton			

\* Two tournaments, in spring and fall.

## National Collegiate Champions

Year	Individual	Team	Year	Individual	Team
1939	Vincent D'Antoni, Tulane	Stanford	1947	Dave Barclay, Michigan	L. S. U.
1940	F. Dixon Brooke, Virginia	Princeton*	1948	Bobby Harris, San Jose St.	San Jose St.
		L. S. U.*	1949	Harvie Ward, North Carolina	No. Tex. St.
1941	Earl Stewart, L. S. U.	Stanford	1950	Fred Wampler, Purdue	No. Tex. St.
1942	Frank Tatum, Jr., Stanford	Stanford*	1951	Tom Nieporte, Ohio State	No. Tex. St.
		L. S. U.*	1952	Jim Vickers, Oklahoma	No. Tex. St.
1943	Wallace Ulrich, Carleton	Yale	1953	Earl Moeller, Okla. A. & M.	Stanford
1944	Louis Lick, Minnesota	Notre Dame	1954	Hillman Robbins, Jr., Memphis St.	S. M. U.
1945	John Lorms, Ohio State	Ohio State	1955	Joe Campbell, Purdue	L. S. U.
1946	Georg Hamer, Georgia	Stanford			

\* Tie.

## Walker Cup Record

## MEN (AMATEUR)

Year	Where played
*1921 United States 9, Great Britain 3...	Hoylake
1922 United States 8, Great Britain 4...	Southampton
1923 United States 6, Great Britain 5...	St. Andrews,
One match halved	Scotland
1924 United States 9, Great Britain 3...	Garden City G. C.
1926 United States 6, Great Britain 5...	St. Andrews,
One match halved	Scotland
1928 United States 11, Great Britain 1...	Wheaton, Ill.
1930 United States 10, Great Britain 2...	Royal St. George's
1932 United States 8, Great Britain 1...	The Country Club,
Three matches halved	Brookline, Mass.
1934 United States 9, Great Britain 2...	St. Andrews,
One match halved	Scotland
1936 United States 9, Great Britain 0...	Pine Valley G. C.,
Three matches halved	Clementon, N. J.
1938 Great Britain 7, United States 4...	St. Andrews,
One match halved	Scotland
1947 United States 8, Great Britain 4...	St. Andrews
1949 United States 10, Great Britain 2...	Winged Foot
1951 United States 6, Great Britain 3...	Southport
1953 United States 9, Great Britain 3...	Kittansett
1955 United States 10, Great Britain 2...	St. Andrews

\* Informal match.

## Curtis Cup Record

## WOMEN

Year	Where played
*1930 Great Britain 8, United States 6....	Sunningdale
1932 United States 5½, Great Britain 3½...	Wentworth, Eng.
1934 United States 6½, Great Britain 2½...	Chew Chase
1936 United States 4½, Great Britain 4½...	Gleneagles
1938 United States 5½, Great Britain 3½...	Essex C. C.
1948 United States 6½, Great Britain 2½...	Birkdale
1950 United States 7½, Great Britain 1½...	Buffalo
1952 Great Britain 5, United States 4....	Muirfield
1954 United States 6, Great Britain 3....	Merion

\* Informal match.

## U. S. Bobsledding Records

The records for the Mt. Van Hoevenberg slide at Lake Placid, N. Y., the only bobs-run in America, follow:

## OLYMPIC BOBRUN (5,178 Feet)

(Times in minutes and seconds)

Two-man (single heat)—Stan Benham-James Bickford, Sno Birds of Lake Placid Club (Jan. 30, 1955).....	1:14.20
Two-man (4 heats)—Stan Benham-James Bickford, Sno Birds of Lake Placid Club (Jan. 30, 1955).....	5:01.47
Four-man (single heat)—Stan Benham, Pat Martin, Chuck Randolph, John Helmer, Sno Birds of Lake Placid Club.....	1:10.25
Four-man (4 heats)—Art Tyler, driver; William Dodge; Thomas Butler; Edgar Seymour, brake, Rochester B. C. (Feb. 19-20, 1955).....	4:44.02

## HALF-MILE COURSE (2,323 Feet)

Two-man (single heat)—James Bickford-Hubert Miller, Saranac Lake B. C. (Jan. 9, 1955).....	0:39.15
Two-man (4 heats)—James Bickford-Pat Buckley, Saranac Lake B. C. (Jan. 26, 1946).....	2:40.61
Four-man (single heat)—James Bickford, driver; Pat Buckley; Lucien Miron; William Dupree, brake, Saranac Lake B. C. (Jan. 27, 1946).....	0:37.03
Four-man (4 heats)—James Bickford, driver; Pat Buckley; Lucien Miron; William Dupree, brake, Saranac Lake B. C. (Jan. 27, 1946).....	2:29.07

## Ryder Cup Record

## MEN (PROFESSIONAL)

Year	Where played
*1926 Great Britain 13½, United States 1½	Wentworth
1927 United States 9½, Great Britain 2½...	Worcester C. C.
1929 Great Britain 7, United States 5.....	Moortown, Eng.
1931 United States 9, Great Britain 3.....	Scioto C. C.
1933 Great Britain 6½, United States 5½...	Southport, Eng.
1935 United States 9, Great Britain 3.....	Ridgewood C. C.
1937 United States 8, Great Britain 4.....	Southport, Eng.
1947 United States 11, Great Britain 1.....	Portland, Oreg.
1949 United States 7, Great Britain 5.....	Ganton, Eng.
1951 United States 9½, Great Britain 2½...	Pinehurst, N. C.
1953 United States 6½, Great Britain 5½...	Wentworth
1955 United States 8, Great Britain 4.....	Palm Springs

\* Informal match.

## SOFTBALL

Source: Amateur Softball Association.

## World Amateur Champions

- 1933—J. L. Gillis, Chicago, Ill.  
 1934—Ke-Nash-A's, Kenosha, Wis.  
 1935—Crimson Coaches, Toledo, Ohio  
 1936—Kodak Park, Rochester, N. Y.  
 1937—Briggs Mfg. Co., Detroit, Mich.  
 1938—Pohlers, Cincinnati, Ohio  
 1939—Carr's, Covington, Ky.  
 1940—Kodak Park, Rochester, N. Y.  
 1941—Bendix Brakes, South Bend, Ind.  
 1942—Deep Rock Oilers, Tulsa, Okla.  
 1943—44—Hammer Field, Fresno, Calif.  
 1945—47—Zollners, Fort Wayne, Ind.  
 1948—Briggs Beautyware, Detroit, Mich.  
 1949—Tip Top Tailors, Toronto, Ontario  
 1950—Clearwater (Fla.) Bombers  
 1951—Dow Chemical Co., Midland, Mich.  
 1952—Briggs Beautyware, Detroit, Mich.  
 1953—Briggs Beautyware, Detroit, Mich.  
 1954—Clearwater (Fla.) Bombers  
 1955—Raybestos Cardinals, Stratford, Conn.

## WOMEN

- 1933—Great Northerns, Chicago, Ill.  
 1934—Hart Motors, Chicago, Ill.  
 1935—Bloomer Girls, Cleveland, Ohio  
 1936—37—National Mfg. Co., Cleveland  
 1938—J. J. Kreig's, Alameda, Calif.  
 1939—J. J. Kreig's, Alameda, Calif.  
 1940—Arizona Ramblers, Phoenix  
 1941—Higgins Midgets, Tulsa, Okla.  
 1942—Jax Maids, New Orleans, La.  
 1943—Jax Maids, New Orleans, La.  
 1944—Lind & Pomeroy, Portland, Ore.  
 1945—Jax Maids, New Orleans, La.  
 1946—Jax Maids, New Orleans, La.  
 1947—Jax Maids, New Orleans, La.  
 1948—Arizona Ramblers, Phoenix  
 1949—Arizona Ramblers, Phoenix  
 1950—Orange (Calif.) Lionettes  
 1951—Orange (Calif.) Lionettes  
 1952—Orange (Calif.) Lionettes  
 1953—Betsy Ross Rockets, Fresno, Calif.  
 1954—Leach Motors Rockets, Fresno, Calif.  
 1955—Orange (Calif.) Lionettes

LAWN TENNIS

LAWN TENNIS is a comparatively modern modification of the ancient game of court tennis. Major Walter Clopton Wingfield thought that something like court tennis might be played outdoors on lawns and in December, 1873, at Nantclwyd, Wales, he introduced his new game under the name of *Sphairistike* at a lawn party. The game was a success and spread rapidly, but the name was a total failure and almost immediately disappeared when all the players and spectators began to refer to the new game as "lawn tennis." In the early part of 1874 a young lady named Mary Ewing Outerbridge returned from Bermuda to New York, bringing with her the implements and necessary equipment of the new game that she had obtained from a British Army supply store in Bermuda. Miss Outerbridge and friends played the first game of lawn tennis in the United States on the grounds of the Staten Island

Cricket and Baseball Club in the spring of 1874.

For a few years the new game went along in haphazard fashion under varying rules. Tennis balls were of no standard size or texture. The nets were set at different heights up to 5 feet on the side and 4 feet in the middle. Some courts were marked out in hour-glass shape, narrow in the middle and wide at both ends. But about 1880 standard measurements for the court and standard equipment within definite limits became the rule. In 1881 the United States Lawn Tennis Association was formed and conducted the first national championship at Newport, R. I. The international matches for the Davis Cup began with a series between the British and United States players on the courts of the Longwood Cricket Club, Chestnut Hill, Mass., in 1900, with the home players winning.

Lawn Tennis Statistics

Source: The Official U.S.L.T.A. Yearbook and Tennis Guide.

DAVIS CUP CHALLENGE ROUND RESULTS

MEN

No matches in 1901, 1910, 1915-18, and 1940-45.					
Year	Result	Where played	Year	Result	Where played
1900	United States 5, British Isles 0	Chestnut Hill	1928	France 4, United States 1	Paris
1902	United States 3, British Isles 2	Brooklyn	1929	France 3, United States 2	Paris
1903	British Isles 4, United States 1	Chestnut Hill	1930	France 4, United States 1	Paris
1904	British Isles 5, Belgium 0	Wimbledon	1931	France 3, Great Britain 2	Paris
1905	British Isles 5, United States 0	Wimbledon	1932	France 3, United States 2	Paris
1906	British Isles 5, United States 0	Wimbledon	1933	Great Britain 3, France 2	Paris
1907	Australasia 3, British Isles 2	Wimbledon	1934	Great Britain 4, United States 1	Wimbledon
1908	Australasia 3, United States 2	Melbourne	1935	Great Britain 5, United States 0	Wimbledon
1909	Australasia 5, United States 0	Sydney	1936	Great Britain 3, Australia 2	Wimbledon
1911	Australasia 5, United States 0	Christchurch	1937	United States 4, Great Britain 1	Wimbledon
1912	British Isles 3, Australasia 2	Melbourne	1938	United States 3, Australia 2	Philadelphia
1913	United States 3, British Isles 2	Wimbledon	1939	Australia 3, United States 2	Haverford
1914	Australasia 3, United States 2	Forest Hills	1946	United States 5, Australia 0	Melbourne
1919	Australasia 4, British Isles 1	Sydney	1947	United States 4, Australia 1	Forest Hills
1920	United States 5, Australasia 0	Auckland	1948	United States 5, Australia 0	Forest Hills
1921	United States 5, Japan 0	Forest Hills	1949	United States 4, Australia 1	Forest Hills
1922	United States 4, Australasia 1	Forest Hills	1950	Australia 4, United States 1	Forest Hills
1923	United States 4, Australasia 1	Forest Hills	1951	Australia 3, United States 2	Sydney
1924	United States 5, Australasia 0	Philadelphia	1952	Australia 4, United States 1	Adelaide
1925	United States 5, France 0	Philadelphia	1953	Australia 3, United States 2	Melbourne
1926	United States 4, France 1	Philadelphia	1954	United States 3, Australia 2	Sydney
1927	France 3, United States 2	Philadelphia	1955	Australia 5, United States 0	Forest Hills

WIGHTMAN CUP RECORD

WOMEN

Year	Result	Where played	Year	Result	Where played
1923	United States 7, England 0	Forest Hills	1936	United States 4, England 3	Wimbledon
1924	England 6, United States 1	Wimbledon	1937	United States 6, England 1	Forest Hills
1925	England 4, United States 3	Forest Hills	1938	United States 5, England 2	Wimbledon
1926	United States 4, England 3	Wimbledon	1939	United States 5, England 2	Forest Hills
1927	United States 5, England 2	Forest Hills	1946	United States 7, England 0	Wimbledon
1928	England 4, United States 3	Wimbledon	1947	United States 7, England 0	Forest Hills
1929	United States 4, England 3	Forest Hills	1948	United States 6, England 1	Wimbledon
1930	England 4, United States 3	Wimbledon	1949	United States 7, England 0	Haverford
1931	United States 5, England 2	Forest Hills	1950	United States 7, England 0	Wimbledon
1932	United States 4, England 3	Wimbledon	1951	United States 6, England 1	Longwood
1933	United States 4, England 3	Forest Hills	1952	United States 7, England 0	Wimbledon
1934	United States 5, England 2	Wimbledon	1953	United States 7, England 0	Rye, N. Y.
1935	United States 4, England 3	Forest Hills	1954	United States 6, England 0	Wimbledon
			1955	United States 6, England 1	Rye, N. Y.



## UNITED STATES CHAMPIONS

## Men's Singles

1881-87—Richard D. Sears	1905—Beals C. Wright	1929—William T. Tilden II	1943—Lt. (jg) Joseph R. Hunt
1888-89—Henry W. Slocum, Jr.	1906—William J. Clothier	1930—John H. Doeg	1944-45—Sgt. Frank A. Parker
1890-92—Oliver S. Campbell	1907-11—William A. Larned	1931-32—H. E. Vines, Jr.	1946-47—John A. Kramer
1893-94—Robert D. Wrenn	1912-13—M. E. McLoughlin*	1933-34—Fred J. Perry	1948-49—Richard Gonzales
1895—Fred H. Hovey	1914—R. N. Williams II	1935—Wilmer L. Allison	1950—Arthur Larsen
1896-97—Robert D. Wrenn	1915—William Johnston	1936—Fred J. Perry	1951-52—Frank Sedgman
1898-1900—Malcolm D. Whitman	1916—R. N. Williams II	1937-38—J. Donald Budge	1953—Tony Trabert
1901-02—William A. Larned	1917-18—R. Lindley Murray†	1939—Robert L. Riggs	1954—E. Victor Seixas, Jr.
1903—Hugh L. Doherty	1919—William Johnston	1940—Donald McNeill	1955—Tony Trabert
1904—Holcombe Ward	1920-25—William T. Tilden II	1941—Robert L. Riggs	
	1926-27—Jean Rene Lacoste	1942—Frederick R. Schroeder, Jr.	
	1928—Henri Cochet		

\* Challenge round abandoned in 1912. † Patriotic tournament in 1917.

## Men's Doubles

1881—C. M. Clark-F. W. Taylor	1927—W. T. Tilden II-F. T. Hunter
1882-84—R. D. Sears-James Dwight	1928—G. M. Lott, Jr.-V. F. Hennessey
1885—R. D. Sears-J. S. Clark	1929-30—G. M. Lott, Jr.-J. H. Doeg
1886-87—R. D. Sears-James Dwight	1931—W. L. Allison-John Van Ryn
1888—O. S. Campbell-V. G. Hall	1932—E. H. Vines, Jr.-K'eth Gledhill
1889—H. W. Slocum, Jr.-H. A. Taylor	1933-34—G. M. Lott, Jr.-L. R. Stofen
1890—V. G. Hall-Clarence Hobart	1935—W. L. Allison-John Van Ryn
1891-92—O. S. Campbell-R. P. Huntington, Jr.	1936—J. D. Budge-C. G. Mako
1893-94—Clarence Hobart-F. H. Hovey	1937—Baron G. von Cramm-Henner Henkel
1895—M. G. Chace-R. D. Wrenn	1938—J. D. Budge-C. G. Mako
1896—C. B. Neel-S. R. Neel	1939—A. K. Quist-J. E. Bromwich
1897-98—L. E. Ware-G. P. Sheldon, Jr.	1940-41—J. A. Kramer-F. R. Schroeder, Jr.
1899-1901—Holcombe Ward-D. F. Davis	1942—Lt. (jg) Gardner Mulloy-W. F. Talbert
1902-03—R. F. Doherty-H. L. Doherty	1943—J. A. Kramer-Cpl. F. A. Parker
1904-1906—Holcombe Ward-B. C. Wright	1944—Lt. Don McNeill-a/c Robert Falkenburg
1907-10—H. H. Hackett-F. B. Alexander	1945—Lt. (sg) Gardner Mulloy-W. F. Talbert
1911—R. D. Little-G. F. Touchard	1946—Gardner Mulloy-W. F. Talbert
1912-14—M. E. McLoughlin-T. C. Bundy	1947—J. A. Kramer-F. R. Schroeder, Jr.
1915-16—William Johnston-C. J. Griffin	1948—Gardner Mulloy-W. F. Talbert
1917—F. B. Alexander-H. A. Throckmorton*	1949—John Bromwich-William Sidwell
1918—W. T. Tilden II-Vincent Richardst	1950—John Bromwich-Frank Sedgman
1919—N. E. Brookes-G. L. Patterson	1951—Frank Sedgman-Kenneth McGregor
1920—William Johnston-C. J. Griffin	1952—E. Victor Seixas, Jr.-Mervyn Rose
1921-22—W. T. Tilden II-Vincent Richards	1953—Mervyn Rose-Rex Hartwig
1923—W. T. Tilden II-B. I. C. Norton	1954—E. Victor Seixas, Jr.-Tony Trabert
1924—H. O. Kinsey-R. G. Kinsey	1955—Kosei Kamo-Atsushi Miyagi
1925-26—Vincent Richards-R. N. Williams II	

\* Patriotic tournament.

† Challenge round abandoned.

## Women's Singles

1887—Ellen F. Hansell	1900—Myrtle McAteer	1912-14—Mary K. Browne	1932-35—Helen Jacobs
1888-89—Bertha L. Townsend	1901—Elisabeth H. Moore	1915-18—Molla Bjurstedt*†	1936—Alice Marble
1890—Ellen C. Roosevelt	1902—Marion Jones	1919—Mrs. George W. Wightman	1937—Anita Lizana
1891-92—Mabel E. Cahill	1903—Elisabeth H. Moore	1920-22—Mrs. Molla B. Mallory	1938-40—Alice Marble
1893—Aline M. Terry	1904—May G. Sutton	1923-25—Helen N. Wills	1941—Mrs. Sarah P. Cooke
1894—Helen R. Helwig	1905—Elisabeth H. Moore	1926—Mrs. Molla B. Mallory	1946—Pauline M. Betz
1895—Juliette P. Atkinson	1906—Helen Homans	1927-29—Helen N. Wills	1947—A. Louise Brough
1896—Elisabeth H. Moore	1907—Evelyn Sears	1930—Betty Nuthall	1948-50—Mrs. M. O. du Pont
1897-98—Juliette P. Atkinson	1908—Mrs. Maud Bargar-Wallach	1931—Mrs. Helen W. Moody	1951-53—Maureen Connolly
1899—Marion Jones	1909-11—Hazel V. Hotchkiss		1954-55—Doris Hart

\* Louise Hammond won patriotic tournament in 1917.

† Challenge round abandoned in 1918.

## Women's Doubles

1890—Ellen C. Roosevelt-Grace W. Roosevelt	1901—J. P. Atkinson-Myrtle McAteer
1891—Mabel E. Cahill-Mrs. W. F. Morgan	1902—J. P. Atkinson-Marion Jones
1892—Mabel E. Cahill-A. M. McKinley	1903—E. H. Moore-Carrie B. Neely
1893—Aline M. Terry-Hattie Butler	1904—May G. Sutton-Miriam Hall
1894-95—Helen R. Helwig-J. P. Atkinson	1905—Helen Homans-Carrie B. Neely
1896—E. H. Moore-J. P. Atkinson	1906—Mrs. L. S. Coe-Mrs. D. S. Platt
1897-98—J. P. Atkinson-Kathleen Atkinson	1907—Marie Weimer-Carrie B. Neely
1899—Jane W. Craven-Myrtle McAteer	1908—Evelyn Sears-Margaret Curtis
1900—Edith Parker-Hallie Champlin	1909-10—Hazel V. Hotchkiss-Edith E. Rotch

1911—Hazel V. Hotchkiss-Eleonora Sears  
 1912—Dorothy Green-Mary K. Browne  
 1913-14—Mary K. Browne-Mrs. R. H. Williams  
 1915—Mrs. G. W. Wightman-Eleonora Sears  
 1916-17—Molla Bjurstedt-Eleonora Sears  
 1918-20—Marion Zinderstein-Eleanor Goss  
 1921—Mary K. Browne-Mrs. R. H. Williams  
 1922—Mrs. J. B. Jessup-Helen N. Wills  
 1923—Kathleen McKane-Mrs. B. C. Covell  
 1924—Mrs. G. W. Wightman-Helen N. Wills  
 1925—Mary K. Browne-Helen N. Wills  
 1926—Elizabeth Ryan-Eleanor Goss  
 1927—Mrs. L. A. Godfree-Ermytrude Harvey  
 1928—Mrs. G. W. Wightman-Helen N. Wills

1929—Mrs. Phoebe Watson-Mrs. L. R. C. Michell  
 1930—Betty Nuthall-Sarah Palfrey  
 1931—Betty Nuthall-Mrs. E. B. Wittingstall  
 1932—Helen Jacobs-Sarah Palfrey  
 1933—Betty Nuthall-Freda James  
 1934—Helen Jacobs-Sarah Palfrey  
 1935—Helen Jacobs-Mrs. S. P. Fabyan  
 1936—Mrs. M. G. Van Ryn-Carolin Babcock  
 1937-40—Mrs. S. P. Fabyan-Allice Marble  
 1941—Mrs. S. P. Cooke-Margaret Osborne  
 1942-47—A. Louise Brough-Margaret Osborne  
 1948-50—A. Louise Brough-Mrs. Margaret O. du Pont  
 1951-54—Doris Hart-Shirley Fry  
 1955—A. Louise Brough-Mrs. Margaret O. du Pont

## BRITISH (WIMBLEDON) CHAMPIONS

### Men's Singles

1877—S. W. Gore  
 1878—P. F. Hadow  
 1879-80—J. T. Hartley  
 1881-86—W. Renshaw  
 1887—H. F. Lawford  
 1888—E. Renshaw  
 1889—W. Renshaw  
 1890—W. J. Hamilton  
 1891-92—W. Baddeley  
 1893-94—J. Pim  
 1895—W. Baddeley  
 1896—H. S. Mahony

1897-1900—R. F. Doherty  
 1901—A. W. Gore  
 1902-06—H. L. Doherty  
 1907—N. E. Brookes  
 1908-09—A. W. Gore  
 1910-13—A. F. Wilding  
 1914—N. E. Brookes  
 1919—G. L. Patterson  
 1920-21—W. T. Tilden II  
 1922—G. L. Patterson\*  
 1923—W. M. Johnston  
 1924—J. Borotra

1925—R. Lacoste  
 1926—J. Borotra  
 1927—H. Cochet  
 1928—R. Lacoste  
 1929—H. Cochet  
 1930—W. T. Tilden II  
 1931—S. B. Wood  
 1932—H. E. Vines, Jr.  
 1933—J. H. Crawford  
 1934-36—F. J. Perry  
 1937-38—J. D. Budge

1939—R. L. Riggs  
 1946—Yvon Petra  
 1947—John A. Kramer  
 1948—R. Falkenburg  
 1949—F. R. Schroeder, Jr.  
 1950—Budge Patty  
 1951—Richard Savitt  
 1952—Frank Sedgman  
 1953—E. Victor Seixas, Jr.  
 1954—Jaroslav Drobný  
 1955—Tony Trabert

\* Challenge round abandoned.

### Men's Doubles

1879—L. R. Erskine-H. F. Lawford  
 1880-81—W. Renshaw-E. Renshaw  
 1882—J. T. Hartley-R. T. Richardson  
 1883—C. W. Grinstead-C. E. Weldon  
 1884-86—W. Renshaw-E. Renshaw  
 1887—P. Bowes-Lyon-H. W. W. Wilberforce  
 1888-89—W. Renshaw-E. Renshaw  
 1890—J. L. Pim-F. O. Stoker  
 1891—W. Baddeley-H. Baddeley  
 1892—H. S. Barrow-E. W. Lewis  
 1893—J. L. Pim-F. O. Stoker  
 1894-96—W. Baddeley-H. Baddeley  
 1897-1901—R. F. Doherty-H. L. Doherty  
 1902—S. H. Smith-F. L. Riseley  
 1903-05—R. F. Doherty-H. L. Doherty  
 1906—S. H. Smith-F. L. Riseley

\* Challenge round abandoned.

1907—N. E. Brookes-A. F. Wilding  
 1908—A. F. Wilding-M. J. G. Ritchie  
 1909—A. W. Gore-H. R. Barrett  
 1910—A. F. Wilding-M. J. G. Ritchie  
 1911—M. Decugis-A. H. Gobert  
 1912-13—H. R. Barrett-C. P. Dixon  
 1914—N. E. Brookes-A. F. Wilding  
 1919—R. V. Thomas-P. O'Hara Wood  
 1920—R. N. Williams II-C. S. Garland  
 1921—R. Lycett-M. Woosnam  
 1922—R. Lycett-J. O. Anderson\*  
 1923—R. Lycett-L. A. Godfree  
 1924—V. Richards-F. T. Hunter  
 1925—J. Borotra-R. Lacoste  
 1926—H. Cochet-J. Brugnon  
 1927—W. T. Tilden II-F. T. Hunter  
 1928—H. Cochet-J. Brugnon

1929-30—W. Allison-J. Van Ryn  
 1931—G. M. Lott-J. Van Ryn  
 1932-33—J. Borotra-J. Brugnon  
 1934—G. M. Lott-L. R. Stoeffen  
 1935—J. H. Crawford-A. K. Quist  
 1936—C. R. D. Tuckey-G. P. Hughes  
 1937-38—J. D. Budge-C. Gene Mako  
 1939—R. L. Riggs-E. T. Cooke  
 1946—J. A. Kramer-Tom Brown  
 1947—J. A. Kramer-R. Falkenburg  
 1948—J. Bromwich-F. Sedgman  
 1949—F. Parker-R. Gonzales  
 1950—J. Bromwich-A. Quist  
 1951-52—F. Sedgman-K. McGregor  
 1953—K. Rosewall-L. Hoad  
 1954—R. Hartwig-M. Rose  
 1955—R. Hartwig-L. Hoad

### Women's Singles

1884-85—M. Watson  
 1886—Miss Bingley  
 1887-88—L. Dod  
 1889—Mrs. Hillyard  
 1890—L. Rice  
 1891-93—L. Dod  
 1894—Mrs. Hillyard  
 1895-96—C. Cooper  
 1897—Mrs. Hillyard  
 1898—C. Cooper  
 1899-1900—Mrs. Hillyard

1901—Mrs. Sterry  
 1902—M. E. Robb  
 1903-04—D. K. Douglas  
 1905—M. Sutton  
 1906—D. K. Douglas  
 1907—M. Sutton  
 1908—Mrs. Sterry  
 1909—D. Boothby  
 1910-11—Mrs. L. Chambers  
 1912—Mrs. Larcombe  
 1913-14—Mrs. L. Chambers

1919-23—Mlle. Lenglen  
 1924—K. McKane  
 1925—Mlle. Lenglen  
 1926—Mrs. Godfree  
 1927-29—Helen Wills  
 1930—Mrs. F. S. Moody  
 1931—Frl. C. Aussen  
 1932-33—Mrs. F. S. Moody  
 1934—D. E. Round  
 1935—Mrs. F. S. Moody

1936—Helen Jacobs  
 1937—D. E. Round  
 1938—Mrs. F. S. Moody  
 1939—Allice Marble  
 1946—Pauline M. Betz  
 1947—Margaret Osborne  
 1948-50—A. Louise Brough  
 1951—Doris Hart  
 1952-54—M. Connolly  
 1955—A. Louise Brough

### Women's Doubles

1913—Mrs. McNair-Miss Boothby  
 1914—E. Ryan-A. M. Morton  
 1919-23—Mlle. Lenglen-E. Ryan  
 1924—Mrs. Wightman-Helen Wills  
 1925—Mlle. Lenglen-E. Ryan  
 1926—E. Ryan-M. K. Browne  
 1927—E. Ryan-Helen Wills  
 1928—Mrs. H. Watson-P. Saunders

1929—Mrs. H. Watson-Mrs. Michell  
 1930—E. Ryan-Mrs. F. S. Moody  
 1931—Mrs. Shepherd-Barron-Mrs. Mudford King  
 1932—Mlle. D. Metaxa-Mlle. J. Sigart  
 1933-34—E. Ryan-Mme. Mathieu  
 1935-36—K. E. Stammers-F. James  
 1937—Mme. S. Mathieu-A. M. Yorka

1938-39—A. Marble-Mrs. S. P. Fabyan  
 1946—A. L. Brough-M. Osborne  
 1947—Doris Hart-Mrs. Pat Todd  
 1948-50—A. L. Brough-Mrs. M. O. du Pont  
 1951-53—Doris Hart-Shirley Fry  
 1954—A. L. Brough-Mrs. M. O. du Pont  
 1955—Angela Mortimer-Anr. Shilcock

## THE OLYMPIC GAMES

(W)—Site of Winter Games. (S)—Site of Summer Games.

1896—Athens	1920—Antwerp	1932—Los Angeles (S)	1952—Oslo (W)
1900—Paris	1924—Chamonix (W)	1936—Garmisch-Parten-	1952—Helsinki (S)
1904—St. Louis	1924—Paris (S)	kirchen (W)	1956—Cortina d'Am-
1906—Athens	1928—St. Moritz (W)	1936—Berlin (S)	pezzo, Italy (W)
1908—London	1928—Amsterdam (S)	1948—St. Moritz (W)	1956—Melbourne (S)
1912—Stockholm	1932—Lake Placid (W)	1948—London (S)	

THE first Olympic Games of which there is record occurred in 776 B.C. and consisted of one event, a great foot race of about 200 yards held on a plain by the river Alpheus (now the Ruphia) just outside the little town of Olympia in Greece. It was from that date that the Greeks began to keep their calendar by "Olympiads," the four-year spans between the celebrations of the famous games. There was a religious as well as an athletic significance to the ancient games and the shrines, temples and sacred fires within the Olympic enclosure were the scenes of worship all through the year whereas the Olympic Games, at the height of their popularity, never lasted more than five days and were held only once every four years.

The competition was entirely amateur at the start and the only prizes were laurel wreaths. Only free Greek citizens were allowed to compete and they had to undergo a strict training course that lasted ten months. But civic rivalry led to trickery and professionalism and the

games became degraded after some centuries. When Rome conquered Greece, the Roman emperors turned the Olympic Games from patriotic, religious and athletic festivals into carnivals and circuses. They dragged on malodorously until they were finally halted by decree of Emperor Theodosius I of Rome in A.D. 394.

The modern Olympic Games, which started in Athens in 1896, are the result of the devotion of a French educator, Baron Pierre de Coubertin, to the idea that, since boys and athletics have gone together down the ages, education and athletics might well go hand-in-hand toward a better international understanding. He planned a revival of the ancient Olympic Games on a world-wide basis and succeeded in getting nine nations to send athletes to the first of the modern games in 1896. Since then more than 35,000 athletes representing about 60 nations have competed in the games.

Interrupted for the second time by war, the modern Olympic Games were resumed at London in 1948.

## OLYMPIC GAMES CHAMPIONS, 1896-1952

Source: United States Olympic Association

### TRACK AND FIELD—MEN

#### 60-Meter Run

1896	A. E. Kraenzlein, United States.....	7s.
1904	Archie Hahn, United States.....	7s.

#### 100-Meter Run

1896	T. E. Burke, United States.....	12s.
1900	F. W. Jarvis, United States.....	10.8s.
1904	Archie Hahn, United States.....	11s.
1906	Archie Hahn, United States.....	11.2s.
1908	R. E. Walker, South Africa.....	10.8s.
1912	R. C. Craig, United States.....	10.8s.
1920	C. W. Paddock, United States.....	10.3s.
1924	H. M. Abrahams, Great Britain.....	10.6s.
1928	Percy Williams, Canada.....	10.2s.
1932	Eddie Tolan, United States.....	10.3s.
1936	Jesse Owens, United States.....	10.3s.*
1948	Harrison Dillard, United States.....	10.3s.
1952	Lindy Remigio, United States.....	10.4s.

\* With the wind.

#### 200-Meter Run

1900	J. W. B. Tewksbury, United States.....	22.2s.
1904	Archie Hahn, United States.....	21.6s.

1908	R. Kerr, Canada.....	22.4s.
1912	R. C. Craig, United States.....	21.7s.
1920	Allan Woodring, United States.....	22s.
1924	J. V. Scholz, United States.....	21.6s.
1928	Percy Williams, Canada.....	21.8s.
1932	Eddie Tolan, United States.....	21.2s.
1936	Jesse Owens, United States.....	20.7s.
1948	Melvin E. Patton, United States.....	21.1s.
1952	Andrew Stanfield, United States.....	20.7s.

#### 400-Meter Run

1896	T. E. Burke, United States.....	54.2.
1900	M. W. Long, United States.....	49.4.
1904	H. L. Hillman, United States.....	49.2.
1906	Paul Pilgrim, United States.....	53.2.
1908	W. Halswelle, Great Britain (walkover).....	50s.
1912	C. D. Reidpath, United States.....	48.2s.
1920	B. G. D. Rudd, South Africa.....	49.6s.
1924	E. H. Liddell, Great Britain.....	47.6s.
1928	Ray Barbuti, United States.....	47.8s.
1932	William Carr, United States.....	46.2s.
1936	Archie Williams, United States.....	46.5s.
1948	Arthur Wint, Jamaica, B.W.I.....	46.2s.
1952	George Rhoden, Jamaica, B. W. I.....	45.9s.



**800-Meter Run**

1896	E. H. Flack, Great Britain	2m.11s.
1900	A. E. Tysoe, Great Britain	2m.1.4s.
1904	J. D. Lightbody, United States	1m.56s.
1906	Paul Pilgrim, United States	2m.1.2s.
1908	M. W. Sheppard, United States	1m.52.8s.
1912	J. E. Meredith, United States	1m.51.9s.
1920	A. G. Hill, Great Britain	1m.53.4s.
1924	D. G. A. Lowe, Great Britain	1m.52.4s.
1928	D. G. A. Lowe, Great Britain	1m.51.8s.
1932	Thomas Hampson, Great Britain	1m.49.8s.
1936	John Woodruff, United States	1m.52.9s.
1948	Malvin Whitfield, United States	1m.49.2s.
1952	Malvin Whitfield, United States	1m.49.2s.

**1,500-Meter Run**

1896	E. H. Flack, Great Britain	4m.33.2s.
1900	C. Bennett, Great Britain	4m.6s.
1904	J. D. Lightbody, United States	4m.5.4s.
1906	J. D. Lightbody, United States	4m.12s.
1908	M. W. Sheppard, United States	4m.3.4s.
1912	A. N. S. Jackson, Great Britain	3m.56.8s.
1920	A. G. Hill, Great Britain	4m.1.8s.
1924	Paavo Nurmi, Finland	3m.53.6s.
1928	H. E. Larva, Finland	3m.53.2s.
1932	Luigi Beccali, Italy	3m.51.2s.
1936	J. E. Lovelock, New Zealand	3m.47.8s.
1948	Henri Eriksson, Sweden	3m.49.8s.
1952	Joseph Barthel, Luxemburg	3m.45.2s.

**5,000-Meter Run**

1912	H. Kolehmainen, Finland	14m.36.6s.
1920	J. Guillemot, France	14m.55.6s.
1924	Paavo Nurmi, Finland	14m.31.2s.
1928	Willie Ritola, Finland	14m.38s.
1932	Lauri Lehtinen, Finland	14m.30s.
1936	Gunnar Hockert, Finland	14m.22.2s.
1948	Gaston Reiff, Belgium	14m.17.6s.
1952	Emil Zatopek, Czechoslovakia	14m.6.6s.

**5-Mile Run**

1906	H. Hawtrey, Great Britain	26m.26.2s.
1908	E. R. Voigt, Great Britain	25m.11.2s.

**10,000-Meter Run**

1912	H. Kolehmainen, Finland	31m.20.8s.
1920	Paavo Nurmi, Finland	31m.45.8s.
1924	Willie Ritola, Finland	30m.23.2s.
1928	Paavo Nurmi, Finland	30m.18.8s.
1932	Janusz Kusocinski, Poland	30m.11.4s.
1936	Ilmari Salminen, Finland	30m.15.4s.
1948	Emil Zatopek, Czechoslovakia	29m.59.6s.
1952	Emil Zatopek, Czechoslovakia	29m.17s.

**Marathon**

1896	S. Loues, Greece	2h.55m.20s.
1900	M. Teato, France	2h.59m.
1904	T. J. Hicks, United States	3h.28m.53s.
1906	W. J. Sherring, Canada	2h.51m.23.6s.
1908	John J. Hayes, United States	2h.55m.18.4s.
1912	K. K. McArthur, South Africa	2h.36m.54.8s.
1920	H. Kolehmainen, Finland	2h.32m.35.8s.
1924	A. O. Stenroos, Finland	2h.41m.22.6s.
1928	El Ouafi, France	2h.32m.57s.
1932	Juan Zabala, Argentina	2h.31m.36s.
1936	Kitei Son, Japan	2h.29m.19.2s.
1948	Delfo Cabrera, Argentina	2h.34m.51.6s.
1952	Emil Zatopek, Czechoslovakia	2h.23m.3.2s.

**110-Meter Hurdles**

1896	Curtis, United States	17.6s.
1900	A. E. Kraenzlein, United States	15.4s.
1904	F. W. Schule, United States	16s.
1906	R. G. Leavitt, United States	16.2s.
1908	Forrest Smithson, United States	15s.
1912	F. W. Kelly, United States	15.1s.

1920	E. J. Thomson, Canada	14.1
1924	D. C. Kinsey, United States	15s.
1928	S. Atkinson, South Africa	14.1
1932	George Saling, United States	14.1
1936	Forrest Towns, United States	14.1
1948	William Porter, United States	13.3
1952	Harrison Dillard, United States	13.3

**200-Meter Hurdles**

1900	A. E. Kraenzlein, United States	25.3
1904	H. L. Hillman, United States	24s.

**400-Meter Hurdles**

1900	J. W. B. Tewksbury, United States	57.6
1904	H. L. Hillman, United States	53s.
1908	C. J. Bacon, United States	55s.
1920	F. F. Loomis, United States	54s.
1924	F. M. Taylor, United States	52.6
1928	Lord David Burghley, Great Britain	53.4
1932	Robert Tisdall, Ireland	51.8
1936	Glenn Hardin, United States	52.4
1948	Roy Cochran, United States	51.1
1952	Charles Moore, United States	50.8

\* Record not allowed.

**2,500-Meter Steeplechase**

1900	G. W. Orton, United States	7m.34s.
1904	J. D. Lightbody, United States	7m.39.1

**3,000-Meter Steeplechase**

1920	P. Hodge, Great Britain	10m.2.4s.
1924	Willie Ritola, Finland	9m.33.6
1928	T. A. Loukola, Finland	9m.21.8
1932	Volmari Iso-Hollo, Finland	10m.33.4
1936	Volmari Iso-Hollo, Finland	9m.3.8s.
1948	Thure Sjostrand, Sweden	9m.4.6s.
1952	Horace Ashenfelter, United States	8m.45.4

\* About 3,450 meters—extra lap by error.

**3,200-Meter Steeplechase**

1908	A. Russell, Great Britain	10m.47.1
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**4,000-Meter Steeplechase**

1900	C. Rimmer, Great Britain	12m.58.1
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**3,000-Meter Team**

1912	United States	9 p.
1920	United States	10 p.
1924	Finland	8 p.

**3-Mile Team**

1908	Great Britain	6 p.
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**8,000-Meter X-Country**

1912	H. Kolehmainen, Finland	45m.11.1
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**8,000-Meter X-Country Team**

1912	Sweden	
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**10,000-Meter X-Country**

1920	Paavo Nurmi, Finland	27m.15s.
1924	Paavo Nurmi, Finland	32m.54.1

**10,000-Meter X-Country Team**

1912	Sweden	10 p.
1920	Finland	10 p.
1924	Finland	11 p.

**1,500-Meter Walk**

1906	George V. Bonhag, United States	7m.12.1
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**3,000-Meter Walk**

1906	G. Stantics, Hungary	
1920	Ugo Frigerio, Italy	13m.14.1

**3,500-Meter Walk**

1902	G. E. Larner, Great Britain	14m.1.1
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### 10,000-Meter Walk

1912	G. H. Goulding, Canada.....	46m.28.4s.
1920	Ugo Frigerio, Italy.....	48m.6.2s.
1924	Ugo Frigerio, Italy.....	47m.49s.
1948	John Mikaelsson, Sweden.....	45m.13.2s.
1952	John Mikaelsson, Sweden.....	45m.2.8s.

### 10-Mile Walk

1908	G. E. Larner, Great Britain.....	1h.15m.57.4s.
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### 50,000-Meter Walk

1932	Thomas W. Green, Great Britain.....	4h.50m.10s.
1936	Harold Whitlock, Great Britain.....	4h.30m.41.4s.
1948	John Jwiggren, Sweden.....	4h.41m.52s.
1952	Giuseppe Bordonì, Italy.....	4h.28m.7.8s.

### 400-Meter Relay

1912	Great Britain.....	42.4s.
1920	United States.....	42.2s.
1924	United States.....	41s.
1928	United States.....	41s.
1932	United States.....	40s.
1936	United States.....	39.8s.
1948	United States.....	40.6s.
1952	United States.....	40.1s.

### 1,600-Meter Relay

1908	United States.....	3m.27.2s.
1912	United States.....	3m.16.6s.
1920	Great Britain.....	3m.22.2s.
1924	United States.....	3m.16s.
1928	United States.....	3m.14.2s.
1932	United States.....	3m.8.2s.
1936	Great Britain.....	3m.9s.
1948	United States.....	3m.10.4s.
1952	Jamaica, B. W. I.....	3m.3.9s.

### Pole Vault

1896	W. W. Hoyt, United States.....	10 ft. 9½ in.
1900	I. K. Baxter, United States.....	10 ft. 9.9 in.
1904	C. E. Dvorak, United States.....	11 ft. 6 in.
1906	Gonder, France.....	11 ft. 6 in.
1908	A. C. Gilbert, United States.....	12 ft. 2 in.
	E. T. Cook, Jr., United States.....	12 ft. 2 in.
1912	H. J. Babcock, United States.....	12 ft. 11½ in.
1920	F. K. Foss, United States.....	13 ft. 5 in.
1924	L. S. Barnes, United States.....	12 ft. 11½ in.
1928	Sabin W. Carr, United States.....	13 ft. 9½ in.
1932	William Miller, United States.....	14 ft. 1½ in.
1936	Earle Meadows, United States.....	14 ft. 3¼ in.
1948	Guinn Smith, United States.....	14 ft. 1½ in.
1952	Robert Richards, United States.....	14 ft. 11.14 in.

### Standing High Jump

1900	R. C. Ewry, United States.....	5 ft. 5 in.
1904	R. C. Ewry, United States.....	4 ft. 11 in.
1906	R. C. Ewry, United States.....	5 ft. 1¼ in.
1908	R. C. Ewry, United States.....	5 ft. 2 in.
1912	Platt Adams, United States.....	5 ft. 4½ in.

### Running High Jump

1896	E. H. Clark, United States.....	5 ft. 11¼ in.
1900	I. K. Baxter, United States.....	6 ft. 2½ in.
1904	S. S. Jones, United States.....	5 ft. 11 in.
1906	Con Leahy, Ireland.....	5 ft. 9½ in.
1908	H. F. Porter, United States.....	6 ft. 3 in.
1912	A. W. Richards, United States.....	6 ft. 4 in.
1920	R. W. Landon, United States.....	6 ft. 4½ in.
1924	H. M. Osborn, United States.....	6 ft. 5¼ in.
1928	Robert W. King, United States.....	6 ft. 4½ in.
1932	Duncan McNaughton, Canada.....	6 ft. 5½ in.
1936	Cornelius Johnson, United States.....	6 ft. 7½ in.
1948	John Winter, Australia.....	6 ft. 6 in.
1952	Walter Davis, United States.....	6 ft. 8.32 in.

### Standing Broad Jump

1900	R. C. Ewry, United States.....	10 ft. 6½ in.
1904	R. C. Ewry, United States.....	11 ft. 4½ in.
1906	R. C. Ewry, United States.....	10 ft. 10 in.
1908	R. C. Ewry, United States.....	10 ft. 11¼ in.
1912	C. Tsilitiras, Greece.....	11 ft. ¼ in.

### Running Broad Jump

1896	E. H. Clark, United States.....	20 ft. 9½ in.
1900	A. E. Kraenzlein, United States.....	23 ft. 6½ in.
1904	Myer Prinstein, United States.....	24 ft. 1 in.
1906	Myer Prinstein, United States.....	23 ft. 7½ in.
1908	Frank Irons, United States.....	24 ft. 6½ in.
1912	A. L. Gutterson, United States.....	24 ft. 11¼ in.
1920	Wm. Petterson, Sweden.....	23 ft. 5½ in.
1924	DeHart Hubbard, United States.....	24 ft. 5½ in.
1928	Edward B. Hamm, United States.....	25 ft. 4¼ in.
1932	Edward Gordon, United States.....	25 ft. 3 in.
1936	Jesse Owens, United States.....	26 ft. 5½ in.
1948	Willie Steele, United States.....	25 ft. 8 in.
1952	Jerome Biffle, United States.....	24 ft. 10.03 in.

### Standing Hop, Step, and Jump

1900	R. C. Ewry, United States.....	34 ft. 8½ in.
1904	R. C. Ewry, United States.....	34 ft. 7½ in.

### Running Hop, Step, and Jump

1896	J. B. Connolly, United States.....	45 ft.
1900	Myer Prinstein, United States.....	47 ft. 4½ in.
1904	Myer Prinstein, United States.....	47 ft.
1906	P. O'Connor, Ireland.....	46 ft. 2 in.
1908	T. J. Ahearne, Great Britain.....	48 ft. 11¼ in.
1912	G. Lindblom, Sweden.....	48 ft. 5½ in.
1920	V. Tuulos, Finland.....	47 ft. 6½ in.
1924	A. W. Winter, Australia.....	50 ft. 11¼ in.
1928	Mikio Oda, Japan.....	49 ft. 10¼ in.
1932	Chuhei Nambu, Japan.....	51 ft. 7 in.
1936	Naoto Tajima, Japan.....	52 ft. 5½ in.
1948	Arne Ahman, Sweden.....	50 ft. 6¼ in.
1952	Adhemar da Silva, Brazil.....	53 ft. 2.59 in.

### 16-Lb. Shot-put

1896	Robert Garrett, United States.....	36 ft. 2 in.
1900	R. Sheldon, United States.....	46 ft. 3½ in.
1904	Ralph Rose, United States.....	48 ft. 7 in.
1906	M. J. Sheridan, United States.....	40 ft. 4½ in.
1908	Ralph Rose, United States.....	46 ft. 7½ in.
1912	P. J. McDonald, United States.....	50 ft. 4 in.
1920	V. Porhola, Finland.....	48 ft. 7½ in.
1924	Clarence Houser, United States.....	49 ft. 2½ in.
1928	John Kuck, United States.....	52 ft. 1½ in.
1932	Leo Sexton, United States.....	52 ft. 6¼ in.
1936	Hans Woelke, Germany.....	53 ft. 1¼ in.
1948	Wilbur Thompson, United States.....	56 ft. 2 in.
1952	Parry O'Brien, United States.....	57 ft. 1.43 in.

### 16-Lb. Shot-put (Both Hands)

1912	Ralph Rose, United States.....	90 ft. 5½ in.
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### 16-Lb. Hammer Throw

1900	J. J. Flanagan, United States.....	167 ft. 4 in.
1904	J. J. Flanagan, United States.....	168 ft. 1 in.
1908	J. J. Flanagan, United States.....	170 ft. 4¼ in.
1912	M. J. McGrath, United States.....	177 ft. 7 in.
1920	P. J. Ryan, United States.....	173 ft. 5½ in.
1924	F. D. Tootell, United States.....	174 ft. 10¼ in.
1928	Patrick O'Callaghan, Ireland.....	168 ft. 7½ in.
1932	Patrick O'Callaghan, Ireland.....	176 ft. 11½ in.
1936	Karl Hein, Germany.....	185 ft. 4 in.
1948	Imre Nemeth, Hungary.....	183 ft. 11½ in.
1952	Jozsef Csermak, Hungary.....	197 ft. 11.67 in.

### 56-Lb. Weight Throw

1904	E. Desmarreau, Canada.....	34 ft. 4 in.
1920	P. J. McDonald, United States.....	36 ft. 11½ in.

**Discus Throw**

1896	Robert Garrett, United States.....	95 ft. 7½ in.
1900	R. Bauer, Hungary.....	118 ft. 2.9 in.
1904	M. J. Sheridan, United States.....	128 ft. 10½ in.
1906	M. J. Sheridan, United States.....	136 ft. ¼ in.
1908	M. J. Sheridan, United States.....	134 ft. 2 in.
1912	A. R. Taipale, Finland.....	148 ft. 3.9 in.
1920	E. Niklander, Finland.....	146 ft. 7 in.
1924	Clarence Houser, United States.....	151 ft. 5¼ in.
1928	Clarence Houser, United States.....	155 ft. 2¼ in.
1932	John Anderson, United States.....	162 ft. 4¾ in.
1936	Ken Carpenter, United States.....	165 ft. 7¾ in.
1948	Adolfo Consolini, Italy.....	173 ft. 2 in.
1952	Simeon Iness, United States.....	180 ft. 6.85 in.

**Discus Throw—Greek Style**

1906	W. Jaervinen, Finland.....	115 ft. 4 in.
1908	M. J. Sheridan, United States.....	124 ft. 8 in.

**Discus Throw (Right and Left Hand)**

1912	A. R. Taipale, Finland.....	271 ft. 10½ in.
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**Javelin Throw**

1906	E. Lemming, Sweden.....	175 ft. 6 in.
1908	E. Lemming, Sweden.....	179 ft. 10½ in.
1912	E. Lemming, Sweden.....	198 ft. 11¼ in.
1920	Jonni Myyra, Finland.....	215 ft. 9¾ in.
1924	Jonni Myyra, Finland.....	206 ft. 6¾ in.
1928	E. H. Lundquist, Sweden.....	218 ft. 6¾ in.
1932	Matti Jarvinen, Finland.....	238 ft. 7 in.
1936	Gerhard Stoeck, Germany.....	235 ft. 8½ in.
1948	Kaj Rautavaara, Finland.....	228 ft. 10½ in.
1952	Cy Young, United States.....	242 ft. 0.79 in.

**Javelin Throw—Free Style**

1908	E. Lemming, Sweden.....	178 ft. 7½ in.
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**Javelin Throw (Both Hands)**

1912	J. J. Saaristo, Finland.....	358 ft. 11½ in.
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**Pentathlon**

1906	H. Mellander, Sweden.....	24 pts.
1912	F. R. Bie, Norway.....	21 pts.
1920	E. R. Lehtonen, Finland.....	14 pts.
1924	E. R. Lehtonen, Finland.....	16 pts.

**Decathlon**

1912	H. Wieslander, Sweden.....	7,724.495 pts.
1920	H. Lovland, Norway.....	6,804.35 pts.
1924	H. M. Osborn, United States.....	7,710.775 pts.
1928	Paavo Yrjola, Finland.....	8,053.29 pts.
1932	James Bausch, United States.....	8,462.23 pts.
1936	Glenn Morris, United States.....	7,900 pts.
1948	Robert B. Mathias, United States.....	7,139 pts.
1952	Robert B. Mathias, United States.....	7,887 pts.

(Old point system used from 1912 to 1932; new point system used in 1936 and 1948; revised point system used in 1952.)

**TRACK AND FIELD—WOMEN****100-Meter Run**

1928	Elizabeth Robinson, United States.....	12.2s.
1932	Stanislawa Walasiewicz, Poland.....	11.9s.
1936	Helen Stephens, United States.....	11.5s.
1948	Fanny Blankers-Koen, Holland.....	11.9s.
1952	Marjorie Jackson, Australia.....	11.5s.

**200-Meter Run**

1948	Fanny Blankers-Koen, Holland.....	24.4s.
1952	Marjorie Jackson, Australia.....	23.7s.

**800-Meter Run**

1928	Lina Radke, Germany.....	2m.16.8s.
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**80-Meter Hurdles**

1932	Mildred Didrikson, United States.....	11.1
1936	Trebisonda Valla, Italy.....	11.1
1948	Fanny Blankers-Koen, Holland.....	11.1
1952	Shirley S. de la Hunty, Australia.....	10.2

**400-Meter Relay**

1928	Canada.....	48.3
1932	United States.....	47.9
1936	United States.....	46.5
1948	Holland.....	47.4
1952	United States.....	45.8

**Running High Jump**

1928	Ethel Catherwood, Canada.....	5 ft. 3 in.
1932	Jean Shiley, United States.....	5 ft. 5¼ in.
1936	Ibolya Csak, Hungary.....	5 ft. 3 in.
1948	Alice Coachman, United States.....	5 ft. 6¼ in.
1952	Ester Brand, South Africa.....	5 ft. 5.75 in.

**Running Broad Jump**

1948	V. O. Gyarmati, Hungary.....	18 ft. 8¾ in.
1952	Yvette Williams, New Zealand.....	20 ft. 5.66 in.

**Discus Throw**

1928	H. Konopacka, Poland.....	129 ft. 11¾ in.
1932	Lillian Copeland, United States.....	133 ft. 2 in.
1936	Gisela Mauermayer, Germany.....	156 ft. 39¼ in.
1948	Micheline Ostermeyer, France.....	137 ft. 6½ in.
1952	Nina Romaschkova, Russia.....	168 ft. 8.5 in.

**Javelin Throw**

1932	Mildred Didrikson, United States.....	143 ft. 4 in.
1936	Tilly Fleischer, Germany.....	148 ft. 2¾ in.
1948	H. Bauma, Austria.....	149 ft. 6 in.
1952	Dana Zatopek, Czechoslovakia.....	165 ft. 7.05 in.

**Shot-put**

1948	Micheline Ostermeyer, France.....	45 ft. 1½ in.
1952	Galina Zybina, Russia.....	50 ft. 2.58 in.

**SWIMMING—MEN****50 Yards**

1904	Zoltan de Halomay, Hungary.....	2
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**100 Meters**

1896	Alfred Hajos, Hungary.....	1m.22.2
1904	Zoltan de Halomay, Hungary.....	1m.2.8
1906	C. M. Daniels, United States.....	1m.13.8
1908	C. M. Daniels, United States.....	1m.5.6
1912	Duke P. Kahanamoku, United States.....	1m.3.4
1920	Duke P. Kahanamoku, United States.....	1m.1.4
1924	John Weissmuller, United States.....	59s.
1928	John Weissmuller, United States.....	58.6s.
1932	Yasuji Miyazaki, Japan.....	58.2s.
1936	Ferenc Csik, Hungary.....	57.6s.
1948	Walter Ris, United States.....	57.3s.
1952	Clarke Scholes, United States.....	57.4s.

\* 100 yards.

**220 Yards**

1900	F. C. V. Lane, Australia.....	
1904	C. M. Daniels, United States.....	2m.44

**400 Meters**

1904	C. M. Daniels, United States.....	6m.16.2
1906	Otto Sheff, Austria.....	6m.23.9
1908	H. Taylor, Great Britain.....	5m.36.5
1912	G. R. Hodgson, Canada.....	5m.24.4
1920	N. Ross, United States.....	5m.26.8
1924	John Weissmuller, United States.....	5m.4.2s.
1928	Albert Zorilla, Argentina.....	5m.1.6s.
1932	Clarence Crabbe, United States.....	4m.48.4
1936	Jack Medica, United States.....	4m.44.4
1948	William Smith, United States.....	4m.41s.
1952	Jean Boiteux, France.....	4m.30.

\* 440 yards.



**500 Meters**

6 Paul Neumann, Austria

**880 Yards**

4 Emil Rausch, Germany..... 13m.11.4s.

**1,000 Meters**

0 Jarvis, Great Britain

**1,200 Meters**

6 Alfred Hajos, Hungary

**1,500 Meters**

8 H. Taylor, Great Britain..... 22m.48.4s.

2 G. R. Hodgson, Canada..... 22m.

0 N. Ross, United States..... 22m.23.2s.

4 A. M. Charlton, Australia..... 20m.6.6s.

8 Arne Borg, Sweden..... 19m.51.8s.

2 Kusuo Kitamura, Japan..... 19m.12.4s.

6 Noboru Terada, Japan..... 19m.13.7s.

8 James McLane, United States..... 19m.18.5s.

2 Ford Konno, United States..... 18m.30s.

**1,600 Meters**

6 H. Taylor, Great Britain..... 28m.28s.

**One Mile**

4 Emil Rausch, Germany..... 27m.18.2s.

**Plunge for Distance**

4 W. E. Dickey, United States..... 62 ft. 6 in.

**800-Meter Relay**

8 Great Britain..... 10m.55.6s.

2 Australia..... 10m.11.6s.

United States..... 10m.4.4s.

United States..... 9m.53.4s.

8 United States..... 9m.36.2s.

2 Japan..... 8m.58.4s.

6 Japan..... 8m.51.5s.

8 United States..... 8m.46s.

2 United States..... 8m.31.1s.

**100-Meter Backstroke**

4 Walter Brack, Germany..... 1m.16.8s.\*

8 Arno Bieberstein, Germany..... 1m.24.6s.

2 Harry Hebner, United States..... 1m.21.2s.

0 Warren Kealoha, United States..... 1m.15.2s.

4 Warren Kealoha, United States..... 1m.13.2s.

8 George Kojac, United States..... 1m.8.2s.

2 Masaji Kiyokawa, Japan..... 1m.8.6s.

6 Adolph Kiefer, United States..... 1m.5.9s.

8 Allen Stack, United States..... 1m.6.4s.

2 Yoshinobu Oyakawa, United States..... 1m.5.4s.

100 yards.

**200-Meter Breast Stroke**

8 F. Holman, Great Britain..... 3m.9.2s.

2 Walter Bathe, Germany..... 3m.1.8s.

0 H. Malmroth, Sweden..... 3m.4.4s.

4 R. D. Skelton, United States..... 2m.56.6s.

8 Y. Tsuruta, Japan..... 2m.48.8s.

2 Yoshiyuki Tsuruta, Japan..... 2m.45.4s.

6 Tetsuo Hamuro, Japan..... 2m.42.5s.

8 Joseph Verdeur, United States..... 2m.39.3s.

2 John Davies, Australia..... 2m.34.4s.

**400-Meter Breast Stroke**

4 Georg Zacharias, Germany..... 7m.23.6s.

0 H. Malmroth, Sweden..... 6m.31.8s.

**1,000-Meter Team Race**

6 Hungary..... 17m.16.2s.

**Springboard Diving**

		Points
1904	G. E. Sheldon, United States.....	12 2-3
1906	Gottlob Walz, Germany.....	
1908	Albert Guerner, Germany.....	85.5
1912	Paul Guenther, Germany.....	6
1920	L. E. Kuehn, United States.....	6
1924	A. C. White, United States.....	7
1928	P. Desjardins, United States.....	185.04
1932	Michael Galitzen, United States.....	161.38
1936	Richard Degener, United States.....	163.57
1948	Bruce Harlan, United States.....	163.64
1952	David Browning, United States.....	205.29

**Fancy High Diving**

		Points
1912	Eric Adlerz, Sweden.....	7
1920	C. E. Pinkston, United States.....	7
1924	A. C. White, United States.....	9

**Plain High Diving**

		Points
1908	H. Johanssen, Sweden.....	83.70
1912	Erik Adlerz, Sweden.....	7
1920	Arvid Wallman, Sweden.....	7
1924	Richard Eve, Australia.....	13½

**Plain and Fancy High Diving**

		Points
1928	P. Desjardins, United States.....	98.74
1932	Harold Smith, United States.....	124.80
1936	Marshall Wayne, United States.....	113.58
1948	Samuel Lee, United States.....	130.05
1952	Samuel Lee, United States.....	156.28

**WATER POLO**

1900	Great Britain
1904	United States
1908	Great Britain defeated Belgium
1912	Great Britain defeated Austria
1920	Great Britain defeated Belgium
1924	France defeated Belgium
1928	Germany defeated Hungary
1932	Hungary defeated Germany
1936	Hungary
1948	Italy
1952	Hungary

**SWIMMING—WOMEN****100 Meters**

1920	Ethelda Bleibtrey, United States.....	1m.13.6s.
1922	Fanny Durack, Australia.....	1m.22.2s.
1924	Ethel Lackie, United States.....	1m.12.4s.
1928	Albina Osipowich, United States.....	1m.11s.
1932	Helene Madison, United States.....	1m.6.8s.
1936	Hendrika Mastenbroek, Holland.....	1m.5.9s.
1948	Greta Andersen, Denmark.....	1m.6.3s.
1952	Katalin Szoke, Hungary.....	1m.6.8s.

**300 Meters**

1920	Ethelda Bleibtrey, United States.....	4m.34s.
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**400 Meters**

1924	Martha Norelius, United States.....	6m.2.2s.
1928	Martha Norelius, United States.....	5m.42.8s.
1932	Helene Madison, United States.....	5m.28.5s.
1936	Hendrika Mastenbroek, Holland.....	5m.26.4s.
1948	Ann Curtis, United States.....	5m.17.8s.
1952	Valerie Gyenge, Hungary.....	5m.12.1s.

## 400-Meter Relay

1912	Great Britain.....	5m.52.8s.
1920	United States.....	5m.11.6s.
1924	United States.....	4m.58.8s.
1928	United States.....	4m.47.6s.
1932	United States.....	4m.38s.
1936	Holland.....	4m.36s.
1948	United States.....	4m.29.2s.
1952	Hungary.....	4m.24.4s.

## 100-Meter Backstroke

1924	Sybil Bauer, United States.....	1m.23.2s.
1928	Marie Braun, Holland.....	1m.22s.
1932	Eleanor Holm, United States.....	1m.19.4s.
1936	Dina Senff, Holland.....	1m.18.9s.
1948	Karen Harup, Denmark.....	1m.14.4s.
1952	Joan Harrison, South Africa.....	1m.14.3s.

## 200-Meter Breast Stroke

1924	Lucy Morton, Great Britain.....	3m.33.2s.
1928	Hilde Schrader, Germany.....	3m.12.6s.
1932	Clare Dennis, Australia.....	3m.6.3s.
1936	Hideo Maehata, Japan.....	3m.3.6s.
1948	Nel van Vliet, Netherlands.....	2m.57.2s.
1952	Eva Szekely, Hungary.....	2m.51.7s.

## Plain High Diving

		Points
1912	Greta Johansson, Sweden.....	39.9
1920	Miss Fryland, Denmark.....	6
1924	Caroline Smith, United States.....	9

## Fancy Springboard Diving

		Points
1920	Aileen Riggan, United States.....	9
1924	Elizabeth Becker, United States.....	8
1928	Helen Meany, United States.....	78.62
1932	Georgia Coleman, United States.....	87.52
1936	Marjorie Gestring, United States.....	89.27
1948	Victoria M. Draves, United States.....	108.74
1952	Mrs. Patricia McCormick, United States.....	147.30

## Plain and Fancy High Diving

		Points
1928	Elizabeth B. Pinkston, United States.....	31.60
1932	Dorothy Poynton, United States.....	40.26
1936	Mrs. Dorothy Poynton Hill, United States.....	33.93
1948	Victoria M. Draves, United States.....	68.87
1952	Mrs. Patricia McCormick, United States.....	79.37

## BASKETBALL

1904	United States	1948	United States
1936	United States	1952	United States

## Olympic Games Competitors

Year	Site	Entries	Year	Site	Entries
1896	Athens.....	484	1924	Paris.....	3,385
1900	Paris.....	427	1928	Amsterdam.....	3,905
1904	St. Louis.....	595	1932	Los Angeles.....	1,700
1906	Athens.....	901	1936	Berlin.....	3,959
1908	London.....	2,082	1948	London.....	6,000
1912	Stockholm.....	3,282	1952	Helsinki.....	5,781
1920	Antwerp.....	2,741			

## 1960 Games in Italy, U. S.

The International Olympic Committee decided in 1955 to hold the 1960 Summer Games in Rome, Italy. The winter events will be held in Squaw Valley, Calif.

## OTHER 1952 CHAMPIONS

## Boxing

Flyweight—Nate Brooks, U. S.  
 Bantamweight—Pentti Hamalainen, Finland  
 Featherweight—Jan Zachara, Czechoslovakia  
 Lightweight—Aureliano Bolognesi, Italy  
 Light welterweight—Charles Adkins, U. S.  
 Welterweight—Zygmunt Chychla, Poland  
 Light middleweight—Laszlo Papp, Hungary  
 Middleweight—Floyd Patterson, U. S.  
 Light heavyweight—Norvel Lee, U. S.  
 Heavyweight—Edward Sanders, U. S.

## Wrestling

## CATCH-AS-CATCH-CAN

Flyweight—Hassen Cemici, Turkey  
 Bantamweight—Shohachi Ishii, Japan  
 Featherweight—Bayram Sit, Turkey  
 Lightweight—Olle Anderberg, Sweden  
 Welterweight—William Smith, U. S.  
 Middleweight—David Gimakuridze, Russia  
 Light heavyweight—Wiking Palm, Sweden  
 Heavyweight—Arsen Mekokishvili, Russia

## Rowing

Single sculls—Jurij Tijukalov, Russia  
 Double sculls—T. Cappaiza-E. Guerrero, Argentina  
 4-oared shell with coxswain—Czechoslovakia  
 4-oared shell without coxswain—Yugoslavia  
 Pair-oared shell with coxswain—R. Salles-G. M. clier, France  
 Pair-oared shell without coxswain—Charles L. Jr.-Thomas Price, U. S.

## SULLIVAN AWARD WINNERS

The James E. Sullivan Memorial Award is given annually to the amateur athlete voted by sports leaders as having done the most to advance sportsmanship.

Year	Winner	Sport
1930	Robert T. Jones, Jr.....	Golf
1931	Bernard E. Berlinger.....	Track and field
1932	James A. Bausch.....	Track and field
1933	Glenn Cunningham.....	Running
1934	William R. Bonthron.....	Running
1935	W. Lawson Little, Jr.....	Golf
1936	Glenn Morris.....	Track and field
1937	J. Donald Budge.....	Tennis
1938	Donald R. Lash.....	Running
1939	Joseph W. Burk.....	Rowing
1940	J. Gregory Rice.....	Running
1941	Leslie MacMitchell.....	Running
1942	Cornelius Warmerdam.....	Pole vaulting
1943	Gilbert L. Dodds.....	Running
1944	Ann Curtis.....	Swimming
1945	Felix (Doc) Blanchard.....	Football
1946	Y. Arnold Tucker.....	Football
1947	John B. Kelly, Jr.....	Rowing
1948	Robert B. Mathias.....	Track and field
1949	Richard T. Button.....	Figure skating
1950	Fred Wilt.....	Running
1951	Robert E. Richards.....	Track and field
1952	Horace Ashenfelter.....	Running
1953	Major Sammy Lee.....	Diving
1954	Malvin Whitfield.....	Track
1955	Harrison Dillard.....	Track

## Dumas Clears 7 Feet in High Jump

Charley Dumas, a 19-year-old Comp (Calif.) Junior College freshman, became the world's first seven-foot high jumper at the final tryouts to determine composition of the 1956 U. S. Olympic track and field team. He cleared 7 feet 1 inch. Dumas' leap was made in the Angeles Memorial Coliseum on June 19, 1956. The previous record was 6 feet 11 inches by Walt (Buddy) Davis of Toledo, A. & M. in 1953.

## BOXING

WHETHER it be called pugilism, prize fighting or boxing, there is no tracing the Sweet Science" to any definite source. Stories of rivals exchanging blows for fun, fame or money go back to earliest recorded history and classical legend. There was a mixture of boxing and wrestling called the "pancratium" in the ancient Olympic Games and in such contests the rivals belabored one another with hands fortified with heavy leather wrappings that were sometimes studded with metal. More than one Olympic competitor lost his life in this brutal exercise.

There was little law or order in pugilism until Jack Broughton, one of the early champions of England, drew up a set of rules for the game in 1743. Broughton, called "the father of English boxing," also credited with having invented boxing gloves. However, these gloves—or "mufflers"—they were called—were used only in teaching "the manly art of self-defense" in training bouts. All professional

championship fights were contested with "bare knuckles" until 1892 when John L. Sullivan lost the heavyweight championship of the world to James J. Corbett in New Orleans in a bout in which both contestants wore regulation gloves.

The Broughton rules were superseded by the London Prize Ring Rules of 1838. The 8th Marquess of Queensberry, with the help of John G. Chambers, put forward the "Queensberry Rules" in 1866, a code that called for gloved contests. Amateurs took quickly to the Queensberry Rules, the professionals slowly.

There is no official international set of rules for boxing even today. Amateur organizations set rules for amateurs in different countries and professional rules set by boxing commissions vary even in different sections of the United States, but the variations are for the most part minor. A prize fighter doesn't have to change his style greatly to ply his trade anywhere in the world.

### Boxing Statistics

Source: Nat Fleischer's *All-Time Ring Record Book*, published and copyrighted by The Ring Book Shop, Inc., Madison Square Garden, New York, N. Y.

### Boxing's Biggest Gates

F—Won on foul.		ND—No decision.		(1st)—First bout.	(2d)—Second bout.	(3d)—Third bout.	
Date	Winner, weight	Loser, weight	Rounds	Site	Receipts	Attendance	
Oct. 22, 1927	Tunney (189½)-Dempsey (192½) (2d) ..		10	Soldier Field, Chicago.....	\$2,658,660	104,943	
Sept. 19, 1946	Louis (207)-Conn (187) (2d) .....		KO 8	Yankee Stadium, New York.....	1,925,564	45,266	
Oct. 23, 1926	Tunney (189½)-Dempsey (190) (1st) .....		10	Sesquicentennial Stdm., Phila.....	1,895,733	120,757	
July 2, 1921	Dempsey (188)-Carpentier (172) .....		KO 4	Boyle's 30 Acres, Jersey City.....	1,789,238	80,000	
Oct. 14, 1923	Dempsey (192½)-Firpo (216½) .....		KO 2	Polo Grounds, New York.....	1,188,603*	82,000	
July 21, 1927	Dempsey (194½)-Sharkey (196) .....		KO 7	Yankee Stadium, New York.....	1,083,530*	75,000	
Oct. 22, 1938	Louis (198½)-Schmeling (193) (2d) .....		KO 1	Yankee Stadium, New York.....	1,015,012*	70,000	
Oct. 24, 1935	Louis (199½)-Max Baer (210½) .....		KO 4	Yankee Stadium, New York.....	1,000,832*	88,150	
Oct. 21, 1955	Marciano (184½)-Moore (188) .....		KO 9	Yankee Stadium, New York.....	948,117	61,574	
Oct. 25, 1948	Louis (213½)-Walcott (194½) (2d) .....		KO 11	Yankee Stadium, New York.....	841,739	42,667	
Oct. 12, 1951	Robinson (157½)-Turpin (159) (2d) .....		KO 10	Polo Grounds, New York.....	767,626	61,370	
Oct. 12, 1930	Schmeling (188)-Sharkey (197) (1st) .....		WF 4	Yankee Stadium, New York.....	749,935	79,222	
Dec. 22, 1937	Louis (197½)-Braddock (197) .....		KO 8	Comiskey Park, Chicago.....	715,470	45,500	
July 26, 1928	Tunney (192)-Heeney (203½) .....		KO 11	Yankee Stadium, New York.....	691,014	45,890	
Oct. 29, 1941	Louis (202½)-Nova (202½) .....		KO 6	Polo Grounds, New York.....	583,711	56,549	
Sept. 19, 1936	Schmeling (192)-Louis (198) (1st) .....		KO 12	Yankee Stadium, New York.....	547,541	42,088	
Sept. 17, 1954	Marciano (187½)-Charles (185½) .....		15	Yankee Stadium, New York.....	543,092	47,585	
Oct. 11, 1924	Wills (217)-Firpo (224½) .....		12	Boyle's 30 Acres, Jersey City.....	509,135	70,000	
Oct. 23, 1952	Marciano (184)-Walcott (196) .....		KO 13	Municipal Stdm., Phila.....	504,645	40,379	
July 16, 1926	Delaney (166½)-Berlenbach (174½) (3d) ..		15	Ebbets Field, Brooklyn.....	461,789	49,186	
Oct. 23, 1923	Leonard (134)-Tendler (133½) (2d) .....		15	Yankee Stadium, New York.....	452,648	58,519	
July 4, 1919	Dempsey (187)-Willard (245) .....		KO 3	Toledo, Ohio.....	452,224	19,650	
Sept. 18, 1941	Louis (199½)-Conn (174) (1st) .....		KO 13	Polo Grounds, New York.....	451,743	60,071	
Oct. 24, 1953	Marciano (185)-LaStarza (184½) .....		KO 11	Polo Grounds, New York.....	435,818	44,562	
Sept. 21, 1932	Sharkey (205)-Schmeling (188) (2d) .....		15	Long Island City Bowl, N. Y.....	432,365	61,863	
Oct. 14, 1934	Max Baer (209½)-Carnera (263½) .....		KO 11	Long Island City Bowl, N. Y.....	428,000	56,000	
July 16, 1947	Graziano (154½)-Zale (159) (2d) .....		KO 6	Chicago Stadium.....	422,918	18,547	
Sept. 25, 1952	Maxim (173)-Robinson (157½) .....		KO 14	Yankee Stadium, New York.....	421,698	47,983	
Oct. 27, 1929	Sharkey (192)-Stribling (182) .....		10	Flamingo Park, Miami Beach, Fla.....	405,000	40,000	
Oct. 12, 1923	Firpo (214)-Willard (242) .....		KO 8	Boyle's 30 Acres, Jersey City.....	390,837	80,000	
July 12, 1923	{ Firpo (212)-McAuliffe (200) .....		KO 3 }	Yankee Stadium, New York.....	385,040	31,000	
	{ Willard (245)-Floyd Johnson (195) .....		KO 11 }				
Sept. 27, 1929	Schmeling (187)-Uzcudun (192½) (1st) ..		15	Yankee Stadium, New York.....	378,902	65,000	
Oct. 27, 1922	Leonard (134½)-Tendler (134½) (1st) ..		ND 12	Boyle's 30 Acres, Jersey City.....	367,862	54,685	
Oct. 3, 1931	Schmeling (189)-Stribling (186½) .....		KO 15	Cleveland Stadium.....	349,415	37,396	

\* Includes income from other sources, such as motion pictures or radio, or both.



## HISTORY OF WORLD HEAVYWEIGHT CHAMPIONSHIP FIGHTS

(Bouts in which title changed hands)

Date	Where held	Winner, weight, age	Loser, weight, age	Rounds	Referee
July 8, 1889	Richburg, Miss.	John L. Sullivan, 198 (30)	Jake Kilrain, 195 (30)	75	John Fitzpatrick
(Last bare-knuckle title fight)					
Sept. 7, 1892	New Orleans, La.	James J. Corbett, 178 (26)	John L. Sullivan, 212 (33)	21	Prof. John Driscoll
March 17, 1897	Carson City, Nev.	Bob Fitzsimmons, 167 (34)	James J. Corbett, 183 (30)	KO 14	George Siler
June 9, 1899	Coney Island, N. Y.	*James J. Jeffries, 206 (24)	Bob Fitzsimmons, 167 (37)	KO 11	George Siler
Feb. 23, 1906	Los Angeles	†Tommy Burns, 180 (24)	Marvin Hart, 188 (29)	20	James J. Jeffries
Dec. 26, 1908	Sydney, N. S. W.	Jack Johnson, 196 (30)	Tommy Burns, 176 (27)	KO 14	Hugh McKinty
July 4, 1910	Reno, Nev.	Jack Johnson, 208 (31)	James J. Jeffries, 227 (34)	KO 15	Tex Rickard
(Jeffries came out of retirement in an effort to regain title)					
April 5, 1915	Havana, Cuba	Jess Willard, 230 (31)	Jack Johnson, 205½ (37)	KO 26	Jack Welch
July 4, 1919	Toledo, Ohio	Jack Dempsey, 187 (24)	Jess Willard, 245 (35)	KO 3	Ollie Pecord
Sept. 23, 1926	Philadelphia	†Gene Tunney, 189½ (28)	Jack Dempsey, 190 (31)	10	Pop Reilly
June 12, 1930	New York	Max Schmeling, 188 (24)	Jack Sharkey, 197 (27)	WF 4	Jim Crowley
June 21, 1932	Long Island City	Jack Sharkey, 205 (29)	Max Schmeling, 188 (26)	15	Gunboat Smith
June 29, 1933	Long Island City	Primo Carnera, 260½ (26)	Jack Sharkey, 201 (30)	KO 6	Arthur Donovan
June 14, 1934	Long Island City	Max Baer, 209½ (25)	Primo Carnera, 263¼ (27)	KO 11	Arthur Donovan
June 13, 1935	Long Island City	Jim Braddock, 193¼ (29)	Max Baer, 209½ (26)	15	Jack McAvoy
June 22, 1937	Chicago	Joe Louis, 197¼ (23)	Jim Braddock, 197 (31)	KO 8	Tommy Thorpe
June 22, 1949	Chicago	(a)Ezzard Charles, 181¼ (27)	Joe Walcott, 195½ (35)	15	Davey Miller
Sept. 27, 1950	New York	(b)Ezzard Charles, 184½ (29)	Joe Louis, 218 (36)	15	Mark Conn
July 18, 1951	Pittsburgh	(c)Rocky Marciano, 184 (28)	Ezzard Charles, 182 (30)	KO 7	Buck McTier
Sept. 23, 1952	Philadelphia		Joe Walcott, 196 (38)	KO 13	Charley Duggan

\* Lack of opposition caused Jeffries to retire in March 1905. He named Marvin Hart and Jack Root as the leading contenders and agreed to referee their fight at Reno, Nev., on July 3, 1905, with the stipulation that he would determine the winner the world champion. Hart, 190 (28), knocked out Root, 171 (23), in the twelfth round. † Burns claimed the title after defeating Hart. Philadelphia Jack O'Brien became another claimant after fighting a round draw with Burns at Los Angeles on Nov. 28, 1906, with Jeffries as the referee. Burns, 180 (25), eliminated O'Brien, 167 (29), by defeating him in 20 rounds at Los Angeles, May 8, 1907. Charles Eytton was the referee. ‡ Tommy retired after his bout with Tom Heeney in New York on July 26, 1928. Tunney, 192 (30), knocked out Heeney 203 (30½), in the eleventh round. Ed Forbes was the referee.

(a) Recognized by the National Boxing Association because Louis had announced his retirement March 1, 1949. (b) Charles gained undisputed possession of the title by beating Louis, who came out of retirement in an effort to regain the crown. (c) Marciano retired April 27, 1956.

## BARE-KNUCKLE HEAVYWEIGHT CHAMPIONS, 1719-1892

- 1719—Jim Figg  
 1734—George Taylor  
 1740—Jack Broughton  
 1750—Jack Slack  
 1760—Bill Stevens  
 1761—George Meggs  
 1765—Bill Darts  
 1777—Harry Sellers  
 1780—Jack Harris  
 1785—Tom (Jackling) Johnson  
 1790—Big Ben Brain  
 1792—Daniel Mendoza  
 1795—John Jackson (retired)  
 1802—Jem Belcher  
 1805—Henry Pearce (Game Chicken)  
 1808—John Gully (declined title)  
 1809—Tom Cribb received belt, not transferable, and cup.  
 1824—Tom Spring received four cups; resigned title.  
 1825—Jim Ward received belt, not transferable.  
 1838—James (Deaf) Burke claimed title.  
 1839—William Thompson (Bendigo) beat Burke; claimed championship; received belt from Jem Ward.  
 1841—Nick Ward (Jem's brother) beat Ben Caunt, Feb. 2. In return match Caunt beat Nick Ward and received belt by subscription. It was transferable.  
 1845—Thompson beat Caunt and got belt.  
 1850—Bill Perry (The Tipton Slasher), after fight with Paddock, claimed title.  
 1851—Harry Broome won title from Perry.  
 1853—Perry claimed title when Broome forfeited £200 to him in a match; retired from ring on Aug. 13.  
 1857—Tom Sayers beat Perry for £200 a side and new belt.  
 1860—Sayers retired after 42-round draw with John C. Heenan (The Benicia Boy), leaving old belt open for competition.  
 1860—Sam Hurst (The Stalybridge Infant) beat Paddock and received belt.  
 1861—Jem Mace beat Hurst.  
 1862—Mace beat Tom King for £200 a side and the belt.  
 1862—King beat Mace and claimed belt. Subsequently given it up. Declined to meet Mace again. Mace claimed belt.  
 1863—King beat Heenan for £1,000 a side.  
 1865—Joe Wormald beat Andrew Marsden for £200 a side and belt, which had been claimed by both. Belt given to Wormald, who forfeited £120 to Mace.  
 1866—Mace and Joe Goss fought draw with £200 a side belt at stake.  
 1867—Wormald received £200 forfeit from Ned O'Baldwin and claimed belt when O'Baldwin failed to appear at starting place.  
 1867—Mace and O'Baldwin drew; £200 a side; title and in abeyance.  
 1868—Wormald and O'Baldwin drew; £200 a side and in America.  
 1869—Mike McCool beat Tom Allen in America for world championship.  
 1870—Mace beat Allen in America for world championship.  
 1871—Mace and Joe Coburn fought draw for champions £500 a side.  
 1882—John L. Sullivan defeated Paddy Ryan for American championship only; 9 rounds, Mississippi City, N. Y. (London Prize Ring rules).  
 1885—Jem Smith beat Jack Davis for £100 a side and championship of England.  
 1887—Jake Kilrain and Jem Smith drew; \$10,000 and Police Gazette Championship of World belt.  
 1889—John L. Sullivan beat Jake Kilrain, 75 rounds, Richburg, Miss., July 8, in last bare-knuckle championship fight; \$10,000 a side and Police Gazette Belt. (Sullivan claimed world title because of draw fought by Kilrain with Smith, England's titleholder.)

## Other World Boxing Titleholders

### LIGHT HEAVYWEIGHT CHAMPIONS

- Jack Root, George Gardner
- 05—Bob Fitzsimmons
- 12—Philadelphia Jack O'Brien
- 16—Jack Dillon
- 20—Battling Levinsky
- 22—Georges Carpentier
- Battling Siki
- 25—Mike McTigue
- 26—Paul Berlenbach
- 27—Jack Delaney (a)
- Mike McTigue
- 29—Tommy Loughran (a)
- 34—Maxie Rosenbloom
- 35—Bob Olin
- 39—John Henry Lewis (a)
- Melio Bettina
- 41—Billy Conn (a)
- 48—Gus Lesnevich
- 50—Freddie Mills
- 53—Joey Maxim
- Archie Moore
- (a) Abandoned title.

### MIDDLEWEIGHT CHAMPIONS

- 72—Tom Chandler (bare knuckles).
- 81—Geo. Rourke (bare knuckles and gloves)
- 82—Mike Donovan (r)
- 91—Jack (Nonpareil) Dempsey
- 97—Bob Fitzsimmons
- 1907—Tommy Ryan, Kid McCoy, Philadelphia Jack O'Brien (t)
- 08—Stanley Ketchel
- Billy Papke
- 10—Stanley Ketchel
- 13—Billy Papke
- Frank K'aus
- 14—George Chip
- 32—Gorilla Jones (NBA); Ben Jeby (N. Y. Comm.)
- 37—Marcel Thil\*
- Al Hostak and Solly Krieger (NBA)
- Solly Krieger, Al Hostak (NBA); Ceferino Garcia (N. Y. Comm.)
- Tony Zale (NBA); Ken Overlin (N. Y. Comm.)
- Tony Zale (NBA); Billy Sosce (N. Y. Comm.)†

-47—Tony Zale

-48—Rocky Graziano

—Tony Zale

-49—Marcel Cerdan

-51—Jake La Motta

—Ray Robinson, Randy Turpin

-52—Ray Robinson (r)

-55—Carl Olson

—Ray Robinson

Retired. (t) Title claimants. (a) Abandoned title. His victory over a foul over Jones gave him a clear title, but the New York Commission withheld recognition. At various times during the 1932-37 period, championship recognition by the different bodies was given to the following: Ben Jeby, Lou Brouillard, Vince Lee, Teddy Yarosz, Babe Risko, and Freddy Steele. Apostoli knocked out Thil in 10 rounds at the Polo Grounds, Sept. 23, 1937, but did not claim the title because of an agreement made with Thil. This was Thil's fight. † Sosce abandoned his claim to the title and became the undisputed champion by defeating Angie Abrams, who had beaten Sosce three times.

### WELTERWEIGHT CHAMPIONS

- 94—Mysterious Billy Smith
- 96—Tommy Ryan
- Kid McCoy (o)
- Rube Ferns, Matty Matthews
- Rube Ferns
- 06—Joe Walcott\*

- 1906-07—Honey Mellody
- 1907 —Mike (Twin) Sullivan†
- 1915 —Ted Lewis†
- 1919-22—Jack Britton
- 1922-26—Mickey Walker
- 1926-27—Pete Latzo
- 1927-29—Joe Dundee
- 1929-30—Jackie Fields
- 1930 —Young Jack Thompson
- 1930-31—Tommy Freeman
- 1931 —Young Jack Thompson
- 1931-32—Lou Brouillard
- 1932-33—Jackie Fields
- 1933 —Young Corbett 3d
- 1933-34—Jimmy McLarnin
- 1934 —Barney Ross
- 1934-35—Jimmy McLarnin
- 1935-38—Barney Ross
- 1938-40—Henry Armstrong
- 1940-41—Fritzie Zivic
- 1941-46—Freddie Cochrane
- 1946-47—Marty Servo (r)
- 1947-51—Ray Robinson (a)
- 1951 —Johnny Bratton (NBA)
- 1951-54—Kid Gavilan
- 1954-55—Johnny Saxton
- 1955 —Tony DeMarco
- 1955-56—Carmen Basilio
- 1956 —Johnny Saxton
- 1956 —Carmen Basilio

(o) Outgrew class. \* Walcott lost on foul to Dixie Kid in 1904, but decision was disputed. Dixie Kid went abroad, outgrew class, and Walcott was again recognized as the champion. † Sullivan outgrew class. The title was claimed by Jimmy Gardner, Jimmy Clabby, Ray Bronson, Clarence (Kid) Farns, Mike Gibbons, Kid Graves, Mike Glover, Ted Lewis, and Jack Britton but no one received recognition as titleholder until Ted Lewis established his claim in 1915. † Lewis outpointed Britton to gain undisputed possession of the crown on Aug. 31, 1915, and fought Britton a number of times over a period of four years with varying results until March 17, 1919, when Britton became the undisputed titleholder by knocking out Lewis. (r) Retired. (a) Abandoned title.

### LIGHTWEIGHT CHAMPIONS

- 1885-96—Jack McAuliffe\*
- 1896-99—Kid Lavigne
- 1899-02—Frank Erne
- 1902-08—Joe Gans
- 1908-10—Battling Nelson
- 1910-12—Ad Wolgast
- 1912-14—Willie Ritchie
- 1914-17—Freddy Welsh
- 1917-25—Benny Leonard (r)
- 1925 —Jimmy Goodrich
- 1941-42—Sammy Angott†
- 1943 —Beau Jack, Bob Montgomery (N. Y. Comm.), Sammy Angott (NBA).
- 1944 —Beau Jack, Bob Montgomery (N. Y. Comm.), Sammy Angott, Juan Zurita (NBA).
- 1945 —Bob Montgomery (N. Y. Comm.), Juan Zurita, Ike Williams (NBA).
- 1946-47—Bob Montgomery (N. Y. Comm.), Ike Williams (NBA).
- 1947-51—Ike Williams
- 1951-52—James Carter
- 1952 —Lauro Salas
- 1952-54—James Carter
- 1925-26—Rocky Kansas
- 1926-30—Sammy Mandell
- 1930 —Al Singer
- 1930-33—Tony Canzoneri
- 1933-35—Barney Ross
- 1935-36—Tony Canzoneri
- 1936-38—Lou Ambers
- 1938-39—Henry Armstrong
- 1939-40—Lou Ambers
- 1940-41—Lew Jenkins
- 1954 —Paddy DeMarco
- 1954-55—James Carter
- 1955-56—Wallace Smith
- 1956 —Joe Brown

\* McAuliffe was champion of America, but never held the world crown, his battle for the world title with Jim Carney of England in 1887 resulting in a 74-round draw. (r) Retired. † Angott announced his retirement on Nov. 13, 1942, leaving the title vacant, but approximately two months later announced his comeback as challenger for the crown.

## FEATHERWEIGHT CHAMPIONS

- 1889 —Freddy Bogan  
 1890 —Billy Murphy  
 1892-1900—George Dixon  
 1900-01—Terry McGovern  
 1901 —Young Corbett (o)  
 1904-08—Brooklyn Tommy Sullivan  
 1908-12—Abe Attell  
 1912-23—Johnny Kilbane  
 1923 —Eugene Criqui  
 1923-25—Johnny Dundee (o)  
 1925-27—Louis (Kid) Kaplan (o)  
 1927-28—Benny Bass  
 1928 —Tony Canzoneri  
 1928-29—Andre Routis  
 1929-32—Batting Battalino (o)  
 1932 —Tommy Paul (NBA); Kid Chocolate (N. Y. Comm.).  
 1933-36—Freddie Miller  
 1936-37—Petey Sarron  
 1937-38—Henry Armstrong (a)  
 1938-40—Joey Archibald  
 1940-41—Harry Jeffra, Joey Archibald  
 1941-42—Chalky Wright  
 1942-48—Willie Pep  
 1948-49—Sandy Saddler  
 1949-50—Willie Pep  
 1950 —Sandy Saddler

(o)Outgrew class. (a)Abandoned title.

## BANTAMWEIGHT CHAMPIONS

- 1890-92—George Dixon (o)  
 1894-99—Jimmy Barry (r)  
 1899-1900—Terry McGovern (o)  
 1901 —Harry Harris (o)  
 1902-03—Harry Forbes  
 1903-04—Frankie Neil  
 1904 —Joe Bowker (o)  
 1905-07—Jimmy Walsh (o)  
 1910-14—Johnny Coulon  
 1914-17—Kid Williams  
 1917-20—Pete Herman  
 1920-21—Joe Lynch  
 1921 —Pete Herman  
 1921-22—Johnny Buff  
 1922-24—Joe Lynch  
 1924 —Abe Goldstein  
 1924-25—Eddie (Cannonball) Martin  
 1925 —Charlie (Phil) Rosenberg (d)  
 1929-35—Al Brown  
 1935-36—Baltazar Sangchili  
 1936 —Tony Marino  
 1936-37—Sixto Escobar  
 1937-38—Harry Jeffra  
 1938-40—Sixto Escobar (r)  
 1940-42—Lou Salica  
 1942-47—Manuel Ortiz  
 1947 —Harold Dade  
 1947-50—Manuel Ortiz  
 1950-52—Vic Toweel  
 1952-54—Jimmy Carruthers (r)  
 1954-56—Robert Cohen  
 1956 —Mario D'Agato

(o)Outgrew class. (r)Retired. (d)Deprived of title when unable to make weight for championship bout.

## FLYWEIGHT CHAMPIONS

- 1916-23—Jimmy Wilde  
 1923-25—Pancho Villa\*  
 1925 —Frankie Genaro  
 1925-27—Fidel La Barba (r)  
 1927 —Corporal Izzy Schwartz†  
 1930 —Midget Wolgast (N. Y. Comm.); Frankie Genaro (NBA).  
 1931-32—Young Perez†  
 1932-35—Jackie Brown  
 1935-38—Benny Lynch (r)  
 1939 —Peter Kane (a)  
 1943-47—Jackie Paterson (d)  
 1947-50—Rinty Monaghan (r)  
 1950 —Terry Allen  
 1950-52—Dado Marino  
 1952-54—Yoshio Shirai  
 1954 —Pascual Perez

\* Villa died in 1925, Genaro claiming title. † Schwartz was recognized as champion by N. Y. Comm., but conditions in the class became confused and were straightened out until an elimination tourney was held in November, 1929. ‡ Perez was recognized as world champion by the International Boxing Union of Europe. (r)Retired. (a)Abandoned title. (d)Deprived of title.

## Famous Firsts in Boxing

First modern ring champion: Jim Ewing of England, 1719.

First set of boxing rules and first set of boxing gloves: Made by Jack Broughton, 1743.

First championship fight in America: Jacob Hyer beat Tom Beasley, 1816.

First glove fight: Between two English boxers, at Aix-la-Chapelle, France, October 8, 1818.

First contest in which motion pictures were filmed for general display to the public: Bob Fitzsimmons vs. Jim Corbett at Carson City, Nevada, 1897.

First million-dollar gate: Jack Dempsey vs. Georges Carpentier at Boyle's Theatre, Jersey City, N. J., July 2, 1919 (\$1,789,238).

First round-by-round fight broadcast: Dempsey vs. Carpentier, 1921, J. and W. White announcer.

First fight to draw over 100,000 people: Jack Dempsey vs. Gene Tunney at Philadelphia, 1926 (120,757).

First fight on television (publicly screened): Eric Boon vs. Arthur Dana Harringay Arena, London, England, February 23, 1939.

## Neil Memorial Award Winners

The Edward J. Neil Memorial Plaque was presented annually by the Boxing Writers Association of New York to the individual who had done the most to further the cause of the sport. The award now goes to the "fighter of the year."

- |   |                     |
|---|---------------------|
| 1938 Jack Dempsey                       | 1947 Gus Lesnevich  |
| 1939 Billy Conn                         | 1948 Ike Williams   |
| 1940 Henry Armstrong                    | 1949 Ezzard Charles |
| 1941 Joe Louis                          | 1950 Ray Robinson   |
| 1942 Sgt. Barney Ross                   | 1951 Joe Walcott    |
| 1943 All U. S. boxers in service        | 1952 Rocky Marciano |
| 1944 Lt. Comdr. Benny Leonard, U.S.M.S. | 1953 Kid Gavilan    |
| 1945 James J. Walker                    | 1954 Carl Olson     |
| 1946 Tony Zale                          | 1955 Carmen Basilio |



# Joe Louis' Title Fights

1937		Sept. 29	Lou Nova, Polo Grounds.....	KO 6
June 22	James J. Braddock, Chicago.....	1942		
(Won heavyweight championship of the world)		Jan. 9	Buddy Baer, Madison Square Garden.....	KO 1
Aug. 30	Tommy Farr, Yankee Stadium.....	Mar. 27	Abe Simon, Madison Square Garden.....	KO 6
1938		1946		
Feb. 23	Nathan Mann, Madison Square Garden....	June 19	Billy Conn, Yankee Stadium.....	KO 8
Apr. 1	Harry Thomas, Chicago.....	Sept. 18	Tami Mauriello, Yankee Stadium.....	KO 1
June 22	Max Schmeling, Yankee Stadium.....	1947		
1939		Dec. 5	Joe Walcott, Madison Square Garden.....	W 15
Jan. 25	John Henry Lewis, Madison Sq. Garden....	1948		
Apr. 17	Jack Roper, Los Angeles.....	June 25	Joe Walcott, Yankee Stadium.....	KO 11
June 28	Tony Galento, Yankee Stadium.....	1950		
Sept. 20	Bob Pastor, Detroit.....	Sept. 27	Ezzard Charles, Yankee Stadium.....	L 15
1940				
Feb. 9	Arturo Godoy, Madison Square Garden....	PROFESSIONAL WEIGHT LIMITS		
Mar. 29	Johnny Paycheck, Madison Square Garden..	lbs.		
June 20	Arturo Godoy, Yankee Stadium.....	Flyweight .....	112	
Oct. 16	Al McCoy, Boston.....	Bantamweight .....	118	
1941		Featherweight .....	126	
Jan. 31	Red Burman, Madison Square Garden.....	Lightweight .....	135	
Feb. 17	Gus Dorazio, Philadelphia.....	Welterweight .....	147	
Apr. 21	Abe Simon, Detroit.....	Middleweight .....	160	
May 23	Buddy Baer, Washington, D. C.....	Light heavyweight .....	175	
June 18	Billy Conn, Polo Grounds.....	Heavyweight .....	over 175	

## BADMINTON

### United States Champions

Men's Singles		Year	Men's Doubles	
Walter R. Kramer, Detroit, Mich....	1937..	Chester Goss—Donald Eversoll, Los Angeles, Calif.		
Walter R. Kramer, Detroit, Mich....	1938..	Hamilton Law—Richard Yeager, Seattle, Wash.		
David G. Freeman, Pasadena, Calif....	1939..	Hamilton Law—Richard Yeager, Seattle, Wash.		
David G. Freeman, Pasadena, Calif....	1940..	Chester Goss—David G. Freeman, Pasadena, Calif.		
David G. Freeman, Pasadena, Calif....	1941..	Chester Goss—David G. Freeman, Pasadena, Calif.		
David G. Freeman, Pasadena, Calif....	1942..	Chester Goss—David G. Freeman, Pasadena, Calif.		
David G. Freeman, Pasadena, Calif....	1947..	D. G. Freeman—Webster Kimball, Pasadena, Calif.		
David G. Freeman, Pasadena, Calif....	1948..	Wynn Rogers, Arcadia, Calif.—D. G. Freeman.		
Marten Mendez, San Diego, Calif....	1949..	Barney McCay, Pasadena—Wynn Rogers, Arcadia.		
Marten Mendez, San Diego, Calif....	1950..	Barney McCay, Pasadena—Wynn Rogers, Arcadia.		
Joseph Alston, San Diego, Calif....	1951..	Wynn Rogers, Arcadia—Joseph Alston		
Marten Mendez, San Diego, Calif....	1952..	Joseph Alston, Fargo, N. D.—Wynn Rogers		
David G. Freeman, Pasadena, Calif....	1953..	Joseph Alston, Detroit—Wynn Rogers		
Eddy Choong, Malaya.....	1954..	Ooi Teik Hock—Ong Poh Lim, Malaya		
J. Alston, So. Pasadena, Calif. ....	1955..	Wynn Rogers, Arcadia, Calif.—Joseph Alston		
Women's Singles		Women's Doubles		
Mrs. Del Barkhuff, Seattle, Wash....	1937..	Mrs. Del Barkhuff—Zoe G. Smith, Seattle, Wash.		
Mrs. Del Barkhuff, Seattle, Wash....	1938..	Mrs. Roy C. Bergman—Helen Gibson, Westport, Conn.		
Mary E. Whittemore, Boston.....	1939..	Mrs. Del Barkhuff—Zoe G. Smith, Seattle, Wash.		
Evelyn Boldrick, San Diego, Calif....	1940..	Elizabeth Anselm—Helen Zabriskie, Oakland, Calif.		
Thelma Kingsbury, Oakland, Calif....	1941..	Thelma Kingsbury—Janet Wright, Oakland, Calif.		
Evelyn Boldrick, San Diego, Calif....	1942..	Evelyn Boldrick, San Diego—Janet Wright, Oakland, Calif.		
Ethel Marshall, Buffalo, N. Y.....	1947..	Thelma K. Scovil—Janet Wright, San Francisco.		
Ethel Marshall, Buffalo, N. Y.....	1948..	Thelma K. Scovil—Janet Wright, San Francisco.		
Ethel Marshall, Buffalo, N. Y.....	1949..	Thelma K. Scovil—Janet Wright, San Francisco.		
Ethel Marshall, Buffalo, N. Y.....	1950..	Thelma K. Scovil—Janet Wright, San Francisco.		
Ethel Marshall, Buffalo, N. Y.....	1951..	Dottie Hann, Manhattan Beach, Calif.—Mrs. L. M. Smith		
Ethel Marshall, Buffalo, N. Y.....	1952..	Ethel Marshall—Beatrice Massman, Buffalo, N. Y.		
Ethel Marshall, Buffalo, N. Y.....	1953..	Judith Devlin—Susan Devlin, Baltimore		
Judith Devlin, Baltimore.....	1954..	Judith Devlin—Susan Devlin, Baltimore		
Margaret Varner, Boston .....	1955..	Judith Devlin—Susan Devlin, Baltimore		

## FOOTBALL

**T**HE PASTIME of kicking a ball around goes back beyond the limits of recorded history. Ancient savage tribes played football of a primitive kind. There was a ball-kicking game played by Athenians and Spartans and Corinthians 2500 years ago and the Greeks had a name for it: *Episkuros*. The Romans had a somewhat similar game called *Harpastum* and are supposed to have carried the game with them when they invaded the British Isles in the First Century, B.C.

Undoubtedly the game known in the United States as Football traces directly to the English game of Rugby, though the modifications have been many and rather sweeping in some directions. There was informal football on our college lawns well over a century ago and an annual Freshman-Sophomore series of "scrimmages" began at Yale in 1840. But the first formal intercollegiate football game in this country was the Princeton-Rutgers contest played at New Brunswick, N. J., on Nov. 6, 1869, with Rutgers winning by 6 goals to 4. Columbia took to the intercollegiate football field in 1870 and Yale in 1872. Soon many colleges were playing football in the autumn.

In those old days games were played with twenty-five, twenty, fifteen or eleven

men on a side by mutual agreement. In 1880 there was a football convention at which Walter Camp of Yale persuaded the delegates to agree to a rule calling for eleven players on a side. In 1882 there was adopted the rule requiring the offensive team to make 5 yards in three downs or surrender the ball to its opponents. The game grew so rough that it was attacked as brutal by many critics and some colleges abandoned the sport. Conditions were so bad in 1906 that President Theodore Roosevelt, an enthusiast for all sports, called a meeting of Yale, Harvard and Princeton representatives at the White House in the hope of reforming and improving the game. The outcome was that the game, with the forward pass introduced and some other modifications of the rules inserted, became faster and cleaner and gradually grew to the tremendous popularity it enjoys today.

Professional football, now firmly established, is an outgrowth of intercollegiate football. The first professional game was played in 1895 at Latrobe, Pa. The National Football League was founded in 1921. The All-America Conference went into action in 1946. At the end of the 1949 season the two major play-for-pay circuits merged, retaining the name of the older league.

### RECORD OF ANNUAL POSTSEASON GAMES

*Source: Official N.C.A.A. Football Guide*

#### Rose Bowl (Pasadena, Calif.)

1902	Michigan 49, Stanford 0	1936	Stanford 7, Southern Methodist 0
1916	Washington State 14, Brown 0	1937	Pittsburgh 21, Washington 0
1917	Oregon 14, Pennsylvania 0	1938	California 13, Alabama 0
1918	Mare Island Marines 19, Camp Lewis 7	1939	Southern California 7, Duke 3
1919	Great Lakes 17, Mare Island Marines 0	1940	Southern California 14, Tennessee 0
1920	Harvard 7, Oregon 6	1941	Stanford 21, Nebraska 13
1921	California 28, Ohio State 0	1942	Oregon State 20, Duke 16*
1922	Washington & Jefferson 0, California 0	1943	Georgia 9, U. C. L. A. 0
1923	Southern California 14, Penn State 3	1944	Southern California 29, Washington 0
1924	Navy 14, Washington 14	1945	Southern California 25, Tennessee 0
1925	Notre Dame 27, Stanford 10	1946	Alabama 34, Southern California 14
1926	Alabama 20, Washington 19	1947	Illinois 45, U. C. L. A. 14
1927	Alabama 7, Stanford 7	1948	Michigan 49, Southern California 0
1928	Stanford 7, Pittsburgh 6	1949	Northwestern 20, California 14
1929	Georgia Tech 8, California 7	1950	Ohio State 17, California 14
1930	Southern California 47, Pittsburgh 14	1951	Michigan 14, California 6
1931	Alabama 24, Washington State 0	1952	Illinois 40, Stanford 7
1932	Southern California 21, Tulane 12	1953	Southern California 7, Wisconsin 0
1933	Southern California 35, Pittsburgh 0	1954	Michigan State 28, U. C. L. A. 20
1934	Columbia 7, Stanford 0	1955	Ohio State 20, Southern California 7
1935	Alabama 29, Stanford 13	1956	Michigan State 17, U. C. L. A. 14

\* Played at Durham, N. C.

#### Browns Win All-Star Game

The Cleveland Browns scored a 26-0 victory over the collegians in the 1956 renewal of the annual All-Star football game in Chicago. Veteran Lou Groza kicked four field goals. Bob Pellegrini, center from the University of Maryland,

was voted most valuable player among the collegians. The defeat was the 14th for the College All-Stars in the series. They have won seven times. Two games ended in ties.

## Sugar Bowl (New Orleans, La.)

935	Tulane 20, Temple 14
936	Texas Christian 3, Louisiana State 2
937	Santa Clara 21, Louisiana State 14
938	Santa Clara 6, Louisiana State 0
939	Texas Christian 15, Carnegie Tech 7
940	Texas A & M 14, Tulane 13
941	Boston College 19, Tennessee 13
942	Fordham 2, Missouri 0
943	Tennessee 14, Tulsa 7
944	Georgia Tech 20, Tulsa 18
945	Duke 29, Alabama 26
946	Oklahoma A & M 33, St. Mary's (Calif.) 13
947	Georgia 20, North Carolina 10
948	Texas 27, Alabama 7
949	Oklahoma 14, North Carolina 6
950	Oklahoma 35, Louisiana State 0
951	Kentucky 13, Oklahoma 7
952	Maryland 28, Tennessee 13
953	Georgia Tech 24, Mississippi 7
954	Georgia Tech 42, West Virginia 19
955	Navy 21, Mississippi 0
956	Georgia Tech 7, Pittsburgh 0

## Cotton Bowl (Dallas, Tex.)

1937	Texas Christian 16, Marquette 6
1938	Rice 28, Colorado 14
1939	St. Mary's (Calif.) 20, Texas Tech 13
1940	Clemson 6, Boston College 3
1941	Texas A & M 13, Fordham 12
1942	Alabama 29, Texas A & M 21
1943	Texas 14, Georgia Tech 7
1944	Randolph Field 7, Texas 7
1945	Oklahoma A & M 34, Texas Christian 0
1946	Texas 40, Missouri 27
1947	Louisiana State 0, Arkansas 0
1948	Southern Methodist 13, Penn State 13
1949	Southern Methodist 21, Oregon 13
1950	Rice 27, North Carolina 13
1951	Tennessee 20, Texas 14
1952	Kentucky 20, Texas Christian 7
1953	Texas 16, Tennessee 0
1954	Rice 28, Alabama 6
1955	Georgia Tech 14, Arkansas 6
1956	Mississippi 14, Texas Christian 13

## Orange Bowl (Miami, Fla.)

933	Miami 7, Manhattan 0
934	Duquesne 33, Miami 7
935	Bucknell 26, Miami 0
936	Catholic University 20, Mississippi 19
937	Duquesne 13, Mississippi State 12
938	Alabama Poly. 6, Michigan State 0
939	Tennessee 17, Oklahoma 0
940	Georgia Tech 21, Missouri 7
941	Mississippi State 14, Georgetown 7
942	Georgia 40, Texas Christian 26
943	Alabama 37, Boston College 21
944	Louisiana State 19, Texas A & M 14

1945	Tulsa 26, Georgia Tech 12
1946	Miami 13, Holy Cross 6
1947	Rice 8, Tennessee 0
1948	Georgia Tech 20, Kansas 14
1949	Texas 41, Georgia 28
1950	Santa Clara 21, Kentucky 13
1951	Clemson 15, Miami (Fla.) 14
1952	Georgia Tech 17, Baylor 14
1953	Alabama 61, Syracuse 6
1954	Oklahoma 7, Maryland 0
1955	Duke 36, Nebraska 7
1956	Oklahoma 20, Maryland 6

## Famous Series Records

Year	Harv.-Yale	Yale-Prin.	Harv.-Prin.	Army-Navy
1890	12 6	32 0	.. ..	0 24
1891	0 10	19 0	.. ..	32 16
1892	0 6	12 0	.. ..	4 12
1893	0 6	0 6	.. ..	4 6
1894	4 12	24 0	.. ..	.. ..
1895	.. ..	20 10	4 12	.. ..
1896	.. ..	6 24	0 12	.. ..
1897	0 0	6 0	.. ..	.. ..
1898	17 0	0 6	.. ..	.. ..
1899	0 0	10 11	.. ..	17 5
1900	0 28	29 5	.. ..	7 11
1901	22 0	12 0	.. ..	11 5
1902	0 23	12 5	.. ..	22 8
1903	0 16	6 11	.. ..	40 5
1904	0 12	12 0	.. ..	11 0
1905	0 6	23 4	.. ..	6 6
1906	0 6	0 0	.. ..	0 10
1907	0 12	12 10	.. ..	0 6
1908	4 0	11 6	.. ..	6 4
1909	0 8	17 0	.. ..	.. ..
1910	0 0	5 3	.. ..	0 3
1911	0 0	3 6	6 8	0 3
1912	20 0	6 6	16 6	0 6
1913	15 5	3 3	3 0	22 9
1914	36 0	19 14	20 0	20 0
1915	41 0	13 7	10 6	14 0
1916	3 6	10 0	3 0	15 7
1919	10 3	6 13	10 10	0 6
1920	9 0	0 20	14 14	0 7
1921	10 3	13 7	3 10	0 7
1922	10 3	0 3	3 10	17 14
1923	0 13	27 0	5 0	0 0

Year	Harv.-Yale	Yale-Prin.	Harv.-Prin.	Army-Navy
1924	6 19	10 0	0 34	12 0
1925	0 0	12 25	0 36	10 3
1926	7 12	7 10	0 12	21 21
1927	0 14	14 6	.. ..	14 9
1928	17 0	2 12	.. ..	.. ..
1929	10 6	13 0	.. ..	.. ..
1930	13 0	10 7	.. ..	6 0
1931	0 3	51 14	.. ..	17 7
1932	0 19	7 7	.. ..	20 0
1933	19 6	2 27	.. ..	12 7
1934	0 14	7 0	0 19	0 3
1935	7 14	7 38	0 35	28 6
1936	13 14	26 23	14 14	0 7
1937	13 6	26 0	34 6	6 0
1938	7 0	7 20	26 7	14 7
1939	7 20	13 6	6 9	0 10
1940	28 0	10 0	0 0	0 14
1941	14 0	6 20	6 4	6 14
1942	3 7	13 6	19 14	0 14
1943	.. ..	27 6	.. ..	0 13
1944	.. ..	.. ..	.. ..	23 7
1945	0 28	20 14	.. ..	32 13
1946	14 27	30 2	13 12	21 18
1947	21 31	0 17	7 33	21 0
1948	20 7	14 20	7 47	21 21
1949	6 29	13 21	13 33	38 0
1950	6 14	12 47	26 63	2 14
1951	21 21	0 27	13 54	7 42
1952	14 41	21 27	21 41	0 7
1953	13 0	26 24	0 6	20 7
1954	13 9	14 21	14 9	20 27
1955	7 21	0 13	7 6	14 6



## Professional Football

## NATIONAL LEAGUE CHAMPIONS

Year	Team	Won	Lost	Tied	Pct.	Year	Team	Won	Lost	Tied	Pct.
1921	Bears (Staley's).....	10	1	1	.909	1941	New York Giants (E).....	8	3	0	.727
1922	Canton Bulldogs.....	10	0	2	1.000	1942	*Washington Redskins (E).....	10	1	0	.909
1923	Canton Bulldogs.....	11	0	1	1.000	1942	Chicago Bears (W).....	11	0	0	1.000
1924	Cleveland Bulldogs.....	7	1	1	.875	1943	*Chicago Bears (W).....	8	1	1	.889
1925	Chicago Cardinals.....	11	2	1	.846	1943	Washington Redskins (E).....	6	3	1	.667
1926	Frankford Yellow Jackets.....	14	1	1	.933	1944	*Green Bay Packers (W).....	8	2	0	.800
1927	New York Giants.....	11	1	1	.917	1944	New York Giants (E).....	8	1	1	.889
1928	Providence Steamrollers.....	8	1	2	.888	1945	*Cleveland Rams (W).....	9	1	0	.900
1929	Green Bay Packers.....	12	0	1	1.000	1945	Washington Redskins (E).....	8	2	0	.800
1930	Green Bay Packers.....	11	3	1	.786	1946	*Chicago Bears (W).....	8	2	1	.800
1931	Green Bay Packers.....	12	2	0	.857	1946	New York Giants (E).....	7	3	1	.700
1932	Chicago Bears.....	7	1	6	.875	1947	*Chicago Cardinals (W).....	9	3	0	.750
1933	*Chicago Bears (W).....	10	2	1	.833	1947	Philadelphia Eagles (E).....	9	4	0	.692
1933	New York Giants (E).....	11	3	0	.786	1948	*Philadelphia Eagles (E).....	9	2	1	.818
1934	*New York Giants (E).....	8	5	0	.615	1948	Chicago Cardinals (W).....	11	1	0	.917
1934	Chicago Bears (W).....	13	0	0	1.000	1949	*Philadelphia Eagles (E).....	11	1	0	.917
1935	*Detroit Lions (W).....	7	3	2	.700	1949	Los Angeles Rams (W).....	8	2	2	.800
1935	New York Giants (E).....	9	3	0	.750	1950	*Cleveland Browns (A).....	11	2	0	.846
1936	*Green Bay Packers (W).....	10	1	1	.909	1950	Los Angeles Rams (N).....	10	3	0	.769
1936	Boston Redskins (E).....	7	5	0	.587	1951	*Los Angeles Rams (N).....	8	4	0	.667
1937	*Washington Redskins (E).....	8	3	0	.727	1951	Cleveland Browns (A).....	11	1	0	.917
1937	Chicago Bears (W).....	9	1	1	.900	1952	*Detroit Lions (N).....	9	3	0	.750
1938	*New York Giants (E).....	8	2	1	.800	1952	Cleveland Browns (A).....	8	4	0	.667
1938	Green Bay Packers (W).....	8	3	0	.727	1953	*Detroit Lions (W).....	10	2	0	.833
1939	*Green Bay Packers (W).....	9	2	0	.818	1953	Cleveland Browns (E).....	11	1	0	.917
1939	New York Giants (E).....	9	1	1	.900	1954	*Cleveland Browns (E).....	9	3	0	.750
1940	*Chicago Bears (W).....	8	3	0	.727	1954	Detroit Lions (W).....	9	2	1	.818
1940	Washington Redskins (E).....	9	2	0	.818	1955	*Cleveland Browns (E).....	9	2	1	.818
1941	*Chicago Bears (W).....	10	1	0	.909	1955	Los Angeles Rams (W).....	8	3	1	.727

\* Won title play-off. (W) Western Division champion. (E) Eastern Division champion. League divided into American (A) and National (N) conferences in 1950. In 1953 the league returned to the Eastern-Western set-up.

## CHAMPIONSHIP PLAY-OFF RESULTS

1933	Chicago Bears 23, New York 21.	1945	Cleveland 15, Washington 14.
1934	New York 30, Chicago Bears 13.	1946	Chicago Bears 24, New York 14.
1935	Detroit 26, New York 7.	1947	Chicago Cardinals 28, Philadelphia 21.
1936	Green Bay 21, Boston 6.	1948	Philadelphia 7, Chicago Cardinals 0.
1937	Washington 28, Chicago Bears 21.	1949	Philadelphia 14, Los Angeles 0.
1938	New York 23, Green Bay Packers 17.	1950	Cleveland 30, Los Angeles 28.
1939	Green Bay 27, New York 0.	1951	Los Angeles 24, Cleveland 17.
1940	Chicago Bears 73, Washington 0.	1952	Detroit 17, Cleveland 7.
1941	Chicago Bears 37, New York 9.	1953	Detroit 17, Cleveland 16.
1942	Washington 14, Chicago Bears 6.	1954	Cleveland 56, Detroit 10.
1943	Chicago Bears 41, Washington 21.	1955	Cleveland 38, Los Angeles 14.
1944	Green Bay 14, New York 7.		

## CHESS

Source: American Chess Bulletin of New York.

## World Champions

1851-58	Adolph Anderssen, Breslau, Germany
1858-62	Paul Morphy, New Orleans, La.
1862-66	Adolf Anderssen, Breslau, Germany
1866-94	William Steinitz, Vienna, Austria
1894-1921	Emanuel Lasker, Berlin, Germany
1921-27	Jose R. Capablanca, Havana, Cuba
1927-35	Alexander A. Alekhine, Moscow, Russia
1935-37	Dr. Max Euwe, Amsterdam, the Netherlands
1937-46	Alexander A. Alekhine, Moscow, Russia*
1948-	Mikhail Botvinnik, Leningrad, Russia

\* Alekhine, a French citizen, died on March 23, 1946.

## United States Champions

1852-62	Paul Morphy, New Orleans, La.
1871-87	George H. Mackenzie, New York
1887-92	Max Judd, St. Louis, Mo.
1892-94	Simon Lipschuetz, New York
1894	Jackson W. Showalter, Georgetown, Ky.
1894	Albert B. Hodges, Staten Island, N. Y.*
1894-97	Jackson W. Showalter, Georgetown, Ky.
1897-1906	Harry Nelson Pillsbury, Boston, Mass.
1906-09	Jackson W. Showalter, Georgetown, Ky.
1909-36	Frank J. Marshall, New York
1936-44	Samuel Reshevsky, New York†
1944-46	Arnold S. Denker, New York
1946	Samuel Reshevsky, Boston
1948	Herman Steiner, Los Angeles
1951	Larry Evans, New York
1954-55	Arthur Bisguier, New York

\* Retired after winning return match with Showalter  
† In 1942, Isaac I. Kashdan of New York was co-champion for a while because of a tie with Reshevsky in the year's tournament. Reshevsky won the play-off.

## LACROSSE

## North-South Game Record

1940—North 6, South 5	1949—South 11, North 6
1941—South 7, North 6	1950—North 12, South 8
1942—North 6, South 3	1951—North 12, South 11
1943—South 9, North 5	1952—South 15, North 7
1946—North 14, South 14	1953—South 12, North 9
1947—North 15, South 3	1954—North 13, South 11
1948—North 11, South 6	1955—South 12, North 11

## ROWING

Rowing goes back so far in history that there is no possibility of tracing it to any particular aboriginal source. The oldest rowing race still on the calendar is the "Doggett's Coat and Badge" contest among professional watermen of the Thames (England) that began in 1715. The first Oxford-Cambridge race was held at Henley in 1829. Competitive rowing in the United States began with matches between boats rowed by professional oarsmen of the New York water front. They were oarsmen who rowed the small boats that plied as ferries from Manhattan Island to Brooklyn and return, or who rowed salesmen down the harbor to meet ships arriving from Europe. Since the first salesman to meet an incoming ship had some advantage over his rivals, there was keen competition in the bidding for fast boats and the best oarsmen. This gave rise to match races for a purse or a side bet on many occasions. The first of such races was held in June, 1811, in four-oared gigs.

Amateur boat clubs sprang up in the United States between 1820 and 1830 and

seven students of Yale joined together to purchase a four-oared lap-streak gig in 1843. The first Harvard-Yale race was held Aug. 3, 1852, on Lake Winnepesaukee, N. H. The first time an American college crew went abroad was in 1869 when Harvard challenged Oxford and was defeated on the Thames. There were early college rowing races on Lake Quinsigamond, near Worcester, Mass., and on Saratoga Lake, N. Y., but the Intercollegiate Rowing Association, in 1895, settled on the Hudson, at Poughkeepsie, as the setting for the annual "Poughkeepsie Regatta." In 1950 the I.R.A. shifted its classic to Marietta, Ohio, and in 1952 it was moved to Syracuse, N. Y. The National Association of Amateur Oarsmen, organized in 1872, has conducted annual championship regattas since that time. The first rowing races were held with lap-streak gigs but shells came into general favor about a century ago. The outrigger was invented in 1830 by Clasper, an Englishman. Yale used the sliding seat in 1870.

## Rowing Statistics

Source: From *American Rowing*, Copyright by Robert F. Kelley; courtesy of G. P. Putnam's Sons.

### Yale-Harvard Varsity Race Record

Rowed at Centre Harbor, N. H., in 1852; Springfield, Mass., in 1855, 1872-73, 1876-77; Worcester, Mass., 1859 to 1870; Saratoga Lake, N. Y., 1874-75; New London, Conn., 1876 to 1895, 1898 to 1916, 1919 to 1941, and since 1947; triangular race at Poughkeepsie, N. Y., in 1897 with Cornell victor in 20:34; Derby, Conn., in 1913, 1942, and Boston, Mass., in 1946. Course was 2 miles in 1852; 3 miles from 1855 to 1875, and 4 miles thereafter.

Year	Winner	Time	Year	Winner	Time	Year	Winner	Time
1852	Harvard	1	1891	Harvard	21:23	1923	Yale	22:10
1855	Harvard	22:00	1892	Yale	20:48	1924	Yale	21:58½
1859	Harvard	19:18	1893	Yale	25:01½	1925	Yale	20:26
1860	Harvard	18:53	1894	Yale	23:45½	1926	Yale	20:14¾
1864	Yale	19:01	1895	Yale	21:30	1927	Harvard	22:35½
1865	Yale	18:42½	1897	Yale	20:44	1928	Yale	20:21½
1866	Harvard	18:43¾	1898	Yale	24:02	1929	Yale	21:20
1867	Harvard	18:12¾	1899	Harvard	20:52½	1930	Yale	20:09¾
1868	Harvard	17:48½	1900	Yale	21:12¾	1931	Harvard	22:21
1869	Harvard	18:02	1901	Yale	23:37	1932	Harvard	21:29
1870	Harvard	20:30²	1902	Yale	20:20	1933	Harvard	22:46¾
1872	Harvard	16:57	1903	Yale	20:19¾	1934	Yale	19:51½
1873	Yale	16:59	1904	Yale	21:40½	1935	Yale	20:19
1874³	Harvard	16:56	1905	Yale	22:33½	1936	Harvard	20:19
1875	Harvard	17:05	1906	Harvard	23:02	1937	Harvard	20:02
1876	Yale	22:02	1907	Yale	21:10	1938	Harvard	20:20
1877	Harvard	24:36	1908⁴	Harvard	24:10	1939	Harvard	20:48¾
1878	Harvard	20:44¾	1909	Harvard	21:50	1940	Harvard	21:38
1879	Harvard	22:15	1910	Harvard	20:46½	1941	Harvard	20:40
1880	Yale	24:27	1911	Harvard	22:44	1942⁷	Harvard	10:09¾
1881	Yale	22:13	1912	Harvard	21:43½	1946⁸	Harvard	9:18
1882	Harvard	20:47½	1913	Harvard	21:42	1947	Harvard	20:40
1883	Harvard	25:46¾	1914	Yale	21:16	1948⁹	Harvard	19:21¾
1884	Yale	20:31	1915	Yale	20:52	1949¹⁰	Yale	19:52¼
1885	Harvard	25:15½	1916	Harvard	20:02	1950	Harvard	21:36¾
1886	Yale	20:42	1918⁵	Harvard	10:58	1951	Harvard	21:26
1887	Yale	22:56	1919⁶	Yale	21:42¾	1952	Yale	22:49
1888	Yale	20:10	1920	Harvard	23:11	1953	Harvard	20:09
1889	Yale	21:30	1921	Yale	20:41	1954	Yale	21:58¾
1890	Yale	21:29	1922	Yale	21:53	1955	Yale	20:05

¹ Harvard won by 3 to 4 lengths. ² Yale ran into Harvard at turn and was disqualified. ³ Yale did not finish, being disabled in collision. ⁴ Yale stroke taken from shell near 3-mile mark. ⁵ Race was informal; rowed at 2 miles in Housatonic. ⁶ Course was 110 feet less than 4 miles. ⁷ Rowed at 2 miles. ⁸ Rowed at 1½ miles. ⁹ Both crews broke downstream record. ¹⁰ Both crews broke upstream record.

# INTERCOLLEGIATE ROWING ASSOCIATION REGATTA

## (Varsity eight-oared shells—4 miles)

Rowed on Saratoga Lake (3 miles) 1898. Rowed on Lake Cayuga, Ithaca, N. Y. (2 miles) 1920. Racing suspended in 1917, 1918, 1919, 1933, and 1942 to 1946, inclusive. Rowed at 3 miles from 1921 to 1924, inclusive, and since 1947. At Poughkeepsie, N. Y., in other years through 1949; at Marietta, Ohio (2 miles) 1950, 1951; at Syracuse, N. Y., since 1952.

Year	Time	First	Second	Third	Fourth	Fifth	Sixth
1895	21:25	Columbia	Cornell				
1896	19:59	Cornell	Harvard	Pennsylvania	Columbia		
1897	20:47 4/5	Cornell	Columbia				
1898	15:51 1/2	Pennsylvania	Cornell	Wisconsin	Columbia		
1899	20:4	Pennsylvania	Wisconsin	Cornell	Columbia		
1900	19:44 3/5	Pennsylvania	Wisconsin	Cornell	Columbia	Georgetown	
1901	18:53 1/5	Cornell	Columbia	Wisconsin	Georgetown	Syracuse	Pennsylvania
1902	19:5 3/5	Cornell	Wisconsin	Columbia	Pennsylvania	Syracuse	Georgetown
1903	18:57	Cornell	Georgetown	Wisconsin	Pennsylvania	Syracuse	Columbia
1904	20:22 3/5	Syracuse	Cornell	Pennsylvania	Columbia	Georgetown	Wisconsin
1905	20:29	Cornell	Syracuse	Georgetown	Columbia	Pennsylvania	Wisconsin
1906	19:36 4/5	Cornell	Pennsylvania	Syracuse	Wisconsin	Columbia	Georgetown
1907	20:2 2/5	Cornell	Columbia	Navy	Pennsylvania	Wisconsin	Georgetown
1908	19:24 1/5	Syracuse	Columbia	Cornell	Pennsylvania	Wisconsin	
1909	19:2	Cornell	Columbia	Syracuse	Wisconsin	Pennsylvania	
1910	20:42 1/5	Cornell	Pennsylvania	Columbia	Syracuse	Wisconsin	
1911	20:10 4/5	Cornell	Columbia	Pennsylvania	Wisconsin	Syracuse	
1912	19:31 2/5	Cornell	Wisconsin	Columbia	Syracuse	Pennsylvania	Stanford
1913	19:28 3/5	Syracuse	Cornell	Washington	Wisconsin	Columbia	Pennsylvania
1914	19:37 4/5	Columbia	Pennsylvania	Cornell	Syracuse	Washington	Wisconsin
1915	19:36 3/5	Cornell	Stanford	Syracuse	Columbia	Pennsylvania	
1916	20:15 2/5	Syracuse	Cornell	Columbia	Pennsylvania		
1920	11:2 3/5	Syracuse	Cornell	Columbia	Pennsylvania		
1921	14:7	Navy	California	Cornell	Pennsylvania	Syracuse	Columbia
1922*	13:33 3/5	Navy	Washington	Syracuse	Cornell	Columbia	Pennsylvania
1923	14:3 1/5	Washington	Navy	Columbia	Syracuse	Cornell	Pennsylvania
1924	15:2	Washington	Wisconsin	Cornell	Pennsylvania	Syracuse	Columbia
1925	19:24 4/5	Navy	Washington	Wisconsin	Pennsylvania	Cornell	Syracuse
1926	19:28 3/5	Washington	Navy	Syracuse	Pennsylvania	Columbia	California
1927	20:57	Columbia	Washington	California	Navy	Cornell	Syracuse
1928	18:35 4/5	California	Columbia	Washington	Cornell	Navy	Syracuse
1929	22:58	Columbia	Washington	Pennsylvania	Navy	Wisconsin	
1930	21:42	Cornell	Syracuse	M. I. T.	California	Columbia	Washington
1931	18:54 1/5	Navy	Cornell	Washington	California	Syracuse	Pennsylvania
1932	19:55	California	Cornell	Washington	Navy	Syracuse	Columbia
1934	19:44	California	Washington	Navy	Cornell	Pennsylvania	Syracuse
1935	18:52	California	Cornell	Washington	Navy	Syracuse	Pennsylvania
1936	19:9 3/5	Washington	California	Navy	Columbia	Cornell	Pennsylvania
1937	18:33 3/5	Washington	Navy	Cornell	Syracuse	California	Columbia
1938	18:19	Navy	California	Washington	Columbia	Wisconsin	Cornell
1939†	18:12 3/5	California	Washington	Navy	Cornell	Syracuse	Wisconsin
1940	22:42	Washington	Cornell	Syracuse	Navy	California	Columbia
1941	18:53 3/10	Washington	California	Cornell	Syracuse	Princeton	Wisconsin
1947	13:59 1/5	Navy	Cornell	Washington	California	Princeton	Syracuse
1948	14:06 2/5	Washington	California	Navy	Cornell	M. I. T.	Princeton
1949	14:42 3/5	California	Washington	Cornell	Navy	Princeton	Pennsylvania
1950	8:07.5	Washington	California	Wisconsin	Stanford	M. I. T.	Columbia
1951	7:50.5	Wisconsin	Washington	Princeton	California	Pennsylvania	M. I. T.
1952	15:08.1	Navy	Princeton	Cornell	Wisconsin	California	Columbia
1953	15:29.6	Navy	Cornell	Washington	Wisconsin	Columbia	California
1954	16:04.4	†Navy	Cornell	Washington	Wisconsin	California	Columbia
1955	15:49.9	Cornell	Pennsylvania	Navy	Washington	Stanford	California

\* Record for three miles. † Record for four miles. ‡ Disqualified.

SEVENTH—1925, Columbia; 1926, Wisconsin; 1927, Pennsylvania; 1928, Pennsylvania; 1930, Pennsylvania; 1931, Columbia; 1932, Pennsylvania; 1934, Columbia; 1935, Columbia; 1936, Syracuse; 1937, Wisconsin; 1938, Syracuse; 1939, Columbia; 1940, Wisconsin; 1941, Rutgers; 1947, Wisconsin; 1948, Pennsylvania; 1949, Wisconsin; 1950, Cornell; 1951, Stanford; 1952, Washington; 1953, Pennsylvania; 1954, Pennsylvania; 1955, Boston U.

EIGHTH—1926, Cornell; 1930, Wisconsin; 1931, Wisconsin; 1932, M. I. T.; 1940, Princeton; 1941, M. I. T.; 1947, M. I. T.; 1948, Wisconsin; 1949, Columbia; 1950, Pennsylvania; 1951, Cornell; 1952, Stanford; 1953, Princeton; 1954, Boston U.; 1955, Princeton.

NINTH—1931, M. I. T.; 1941, Columbia; 1947, Pennsylvania; 1948, Syracuse; 1949, Syracuse; 1950, Princeton; 1951, Syracuse; 1952, Pennsylvania; 1953, Syracuse; 1954, Princeton; 1955, Princeton.

ton; 1951, Syracuse; 1952, Pennsylvania; 1953, Syracuse; 1954, Princeton; 1955, Wisconsin.

TENTH—1947, Rutgers; 1948, Columbia; 1949, Stanford; 1950, Syracuse; 1951, Boston U.; 1952, M. I. T.; 1953, M. I. T.; 1954, M. I. T.; 1955, M. I. T.

ELEVENTH—1947, Columbia; 1948, Rutgers; 1949, M. I. T.; 1950, Rutgers; 1951, Columbia; 1952, Syracuse; 1953, Stanford; 1954, Syracuse; 1955, Columbia.

TWELFTH—1949, Rutgers; 1950, Navy; 1951, Navy; 1955, Syracuse.

SWAMPED—1895, Pennsylvania; 1897, Pennsylvania; 1907, Syracuse; 1929, M. I. T., Syracuse, California; 1930, Navy.



# SQUASH RACQUETS

Source: United States Squash Racquets Association.

## National Singles Champions

1907-08.....	John A. Miskey, Overbrook G. C.	1932.....	Beekman Pool, Harvard University
1909.....	W. L. Freeland, Germantown C. C.	1933.....	Beekman Pool, Harvard Club, New York
1910.....	John A. Miskey, Overbrook G. C.	1934.....	Neil J. Sullivan, Germantown C. C.
1911.....	F. S. White, Germantown C. C.	1935.....	Donald Strachan, Philadelphia C. C.
1912.....	Constantine Hutchins, Boston A. A.	1936.....	Germain G. Glidden, Harvard University
1913.....	Mortimer L. Newhall, Germantown C. C.	1937-38.....	Germain G. Glidden, Harvard Club, New York
1914.....	Constantine Hutchins, Boston T. and R. Club	1939.....	Donald Strachan, Merion C. C.
1915-17.....	Stanley W. Pearson, Germantown C. C.	1940.....	A. Willing Patterson, Philadelphia R. C.
1918-19.....	No tournaments	1941-42.....	Charles W. Brinton, Princeton University
1920.....	Charles C. Peabody, Union B. C., Boston	1943-45.....	No tournaments
1921-23.....	Stanley W. Pearson, Philadelphia R. C.	1946-47.....	Charles W. Brinton, Philadelphia
1924.....	Gerald Roberts, Bath Club, London	1948.....	Stanley W. Pearson, Jr., Philadelphia
1925.....	W. Palmer Dixon, Harvard University	1949.....	Hunter H. Lott, Jr., Merion C. C.
1926.....	W. Palmer Dixon, R. and T. Club, N. Y.	1950-51.....	Edward Hahn, Detroit
1927.....	Myles P. Baker, Boston A. A.	1952.....	Harry Conlon, Buffalo, N. Y.
1928.....	Herbert N. Rawlins, Jr., R. and T. Club, N. Y.	1953.....	Ernie Howard, Toronto
1929.....	J. Lawrence Pool, Harvard Club, New York	1954.....	G. Diehl Mateer, Jr., Philadelphia
1930.....	Herbert N. Rawlins, Jr., R. and T. Club, N. Y.	1955.....	Henri Salaun, Boston
1931.....	J. Lawrence Pool, Harvard Club, New York		

## Lapham International Trophy Record

Year	Result	Where played	Year	Result	Where played
1922	U. S. 11, Canada 2.....	Boston	1939	Canada 11, U. S. 4.....	Toronto
1923	U. S. 9, Canada 3.....	Toronto	1940	Canada 10, U. S. 5.....	Hartford
1924	U. S. 7½, England 6, Canada 1½.....	Philadelphia	1941	U. S. 8, Canada 7.....	Toronto
1925	U. S. 10, Canada 5.....	Montreal	1942	U. S. 13, Canada 2.....	Rochester, N. Y.
1926	U. S. 13, Canada 2.....	New York	1943	Canada 7, U. S. 5.....	Montreal
1927	England 17½, U. S. 16½, Canada 11.....	Toronto	1944	U. S. 12, Canada 3.....	New York
1928	U. S. 14, Canada 1.....	Buffalo	1945	Canada 12, U. S. 3.....	Toronto
1929	Canada 8, U. S. 4.....	Hamilton	1946	U. S. 13, Canada 2.....	Boston
1930	U. S. 8, Canada 1.....	Baltimore	1947	Canada 9, U. S. 6.....	Hamilton
1931	Canada 6, U. S. 5.....	Quebec	1948	U. S. 15, Canada 5.....	Hartford
1932	U. S. 8, Canada 0.....	Hartford	1949	Canada 7, U. S. 3.....	Quebec
1933	Canada 11, U. S. 4.....	Toronto	1950	U. S. 7, Canada 6.....	Providence
1934	U. S. 10, Canada 1.....	Cedarhurst, N. Y.	1951	U. S. 8, Canada 7.....	Toronto
1935	U. S. 11, Canada 4.....	Montreal	1952	Canada 9, U. S. 6.....	Rochester, N. Y.
1936	U. S. 10, Canada 2.....	Detroit	1953	U. S. 9, Canada 6.....	Montreal
1937	Canada 8, U. S. 7.....	Montreal	1954	U. S. 14, Canada 1.....	Hartford
1938	U. S. 13, Canada 2.....	Boston	1955	Canada 7, U. S. 6.....	Quebec City

# RACQUETS

Source: Allison Danzig, *The New York Times*.

## National Champions

1890	B. Spalding de Garmendia, N. Y. Racquet Court	1917	C. C. Pell, R. and T. Club and Tuxedo
1891	B. Spalding de Garmendia, R. and T. Club	1918-19	No tournaments
1892	J. S. Tooker, R. and T. Club, Boston A. A.	1920-22	C. C. Pell, R. and T. Club and Tuxedo
1893-94	B. Spalding de Garmendia, R. and T. Club	1923	S. G. Mortimer, R. and T. Club and Tuxedo
1895	J. S. Tooker, R. and T. Club, Boston A. A.	1924-25	C. C. Pell, R. and T. Club and Tuxedo
1896-97	B. Spalding de Garmendia, R. and T. Club	1926	S. G. Mortimer, R. and T. Club and Tuxedo
1898	F. F. Rolland, Canada	1927-28	C. C. Pell, R. and T. Club and Tuxedo
1899	Quincy A. Shaw, Jr., Boston A. A.	1929	H. D. Sheldon, R. and T. Club
1900	Eustace H. Miles, England	1930	S. G. Mortimer, R. and T. Club and Tuxedo
1901	Quincy A. Shaw, Jr., Boston A. A.	1931-33	C. C. Pell, R. and T. Club and Tuxedo
1902	Clarence H. Mackay, R. and T. Club	1934	E. M. Edwards, Philadelphia R. C.
1903	Payne Whitney, R. and T. Club	1935	H. D. Sheldon, R. and T. Club
1904	George H. Brooke, Philadelphia R. C.	1936	E. M. Edwards, Philadelphia R. C.
1905	Lawrence Waterbury, R. and T. Club	1937-39	Robert Grant, III, R. and T. Club
1906	Percy D. Haughton, R. and T. Club	1940	Warren Ingersoll, III, Philadelphia R. C.
1907	Reginald Fincke, R. and T. Club	1941	Robert Grant, III, R. and T. Club
1908	Quincy A. Shaw, Jr., Boston T. and R. Club	1942-45	No tournaments
1909	H. F. McCormick, University Club, Chicago	1946	Robert Grant, III, R. and T. Club
1910	Quincy A. Shaw, Jr., Boston T. and R. Club	1947	J. Richards Leonard, R. and T. Club
1911-12	Reginald Fincke, R. and T. Club	1948-51	Robert Grant, III, R. and T. Club
1913-14	Lawrence Waterbury, R. and T. Club	1952	S. W. Pearson, Jr., Philadelphia R. C.
1915	C. C. Pell, R. and T. Club and Tuxedo	1953	Robert Grant, III, R. and T. Club
1916	S. G. Mortimer, R. and T. Club and Tuxedo	1954-55	Geoffrey W. T. Atkins, Chicago

## Tuxedo (N. Y.) Gold Racquet Winners

1904	M. S. Barger, R. and T. Club	1932-33	C. C. Pell, R. and T. Club and Tuxedo
1905-07	C. H. Mackay, R. and T. Club	1934	J. R. Leonard, R. and T. Club
1908	J. G. Douglas, R. and T. Club	1935	H. B. Sheldon, R. and T. Club
1909	H. F. McCormick, Chicago Univ. Club	1936	C. C. Pell, R. and T. Club and Tuxedo
1910	G. C. Clark, R. and T. Club	1937-39	R. Grant, III, R. and T. Club
1911-12	J. G. Douglas, R. and T. Club	1940	J. R. Leonard, R. and T. Club
1913	H. F. McCormick, Chicago Univ. Club	1941	R. Grant, III, R. and T. Club
1914-17	C. C. Pell, R. and T. Club and Tuxedo	1942-45	No tournaments
1918-20	No tournaments	1946-47	R. Grant, III, R. and T. Club
1921-23	C. C. Pell, R. and T. Club and Tuxedo	1948	J. R. Leonard, R. and T. Club
1924	S. G. Mortimer, R. and T. Club and Tuxedo	1949-50	R. Grant, III, R. and T. Club
1925-27	C. C. Pell, R. and T. Club and Tuxedo	1951	R. A. A. Holt, London, England
1928	S. G. Mortimer, R. and T. Club and Tuxedo	1952	S. W. Pearson, Jr., Philadelphia R. C.
1929-30	C. C. Pell, R. and T. Club and Tuxedo	1953-55	Geoffrey W. T. Atkins, Chicago
1931	S. G. Mortimer, R. and T. Club and Tuxedo		

## SQUASH TENNIS

### National Champions

Year	Winner and Club	Year	Winner and Club
1911-12.....	Alfred Stillman, Harvard	1930-37.....	Harry F. Wolf, New York A. C.
1913.....	George Whitney, Harvard	1938.....	Harry F. Wolf, Montclair
1914.....	Alfred Stillman, Harvard	1939-40.....	Harry F. Wolf, New York A. C.
1915-17.....	Eric S. Winston, Harvard	1941.....	Joseph J. Lordi, New York A. C.
1918.....	Fillmore Van S. Hyde, Harvard	1942.....	H. Robert Reeve, Bayside T. C.
1919.....	John W. Appel, Jr., Harvard	1943-45.....	No tournaments
1920.....	Auguste J. Cordier, Yale	1946.....	Frank R. Hanson, Columbia
1921.....	Fillmore Van S. Hyde, Harvard	1947.....	Frederick B. Ryan, Jr., Yale
1922.....	Thomas R. Coward, Yale	1948-49.....	H. Robert Reeve, Bayside T. C.
1923.....	R. Earl Fink, Crescent	1950.....	H. Robert Reeve, Nassau C. C.
1924.....	Fillmore Van S. Hyde, Harvard	1951.....	J. T. P. Sullivan, Yale
1925.....	William Rand, Jr., Harvard	1952.....	H. Robert Reeve, New York A. C.
1926.....	Fillmore Van S. Hyde, Harvard	1953.....	Howard J. Rose, Princeton Club
1927-29.....	Rowland B. Haines, Columbia	1954-55.....	H. Robert Reeve, Bayside T. C.

## COURT TENNIS

*Source: Allison Danzig, The New York Times.*

### National Champions

1892	Richard D. Sears, Boston A. A.	1928-29	Hewitt Morgan, R. and T. Club
1893	Fiske Warren, Boston A. A.	1930	Lerd Aberdare, England
1894-95	B. Spalding de Garmendia, R. and T. Club	1931-32	William C. Wright, Philadelphia
1896	Lawrence M. Stockton, Boston A. A.	1933	James H. Van Alen, R. and T. Club
1897	George R. Fearing, Jr., Boston A. A.	1934-37	Ogden Phipps, R. and T. Club
1898-99	Lawrence M. Stockton, Boston A. A.	1938	James H. Van Alen, R. and T. Club
1900	Eustace H. Miles, England	1939	Ogden Phipps, R. and T. Club
1901-04	Joshua Crane, Boston A. A.	1940	James H. Van Alen, R. and T. Club
1905	Charles E. Sands, R. and T. Club	1941	Alastair B. Martin, R. and T. Club
1906-17	Jay Gould, Philadelphia R. C.	1942-45	No tournaments
1918-19	No tournaments	1946	Robert Grant, III, R. and T. Club
1920-25	Jay Gould, Philadelphia R. C.	1947	E. M. Beals, Jr., Boston
1926	C. Suydam Cutting, R. and T. Club	1948-49	Ogden Phipps, Roslyn, N. Y.
1927	George Huband, England, and Chicago R. C.	1950-55	Alastair B. Martin, R. and T. Club

## CASTING

### World Records

DISTANCE EVENTS		Feet	
Trout fly (average)—Jack Crossfield.....		186 1/4	
Trout fly (long cast)—Jack Crossfield.....		194	
Salmon fly (average)—Myron C. Gregory.....		200 1/2	
Salmon fly (long cast)—Myron C. Gregory.....		212	
3/4-oz. bait (average)—Richard R. Ward.....		368	
3/4-oz. bait (long cast)—Richard R. Ward.....		386	
5/8-oz. bait (average)—Charles L. Schall.....		443	
5/8-oz. bait (long cast)—John Kiedaisch.....		449	
ACCURACY EVENTS			
Dry fly—Tie among Frank Steel, Marvin Allen, Allan Childers, Don Meyer and Roy Norton.....		100 pts.	
Wet fly—Held by 51 casters.....		100 pts.	
3/8-oz. bait—Tie among S. G. Dennis,			
Adelca McDonald, J. H. Wine, Marlon Garber, Marvin Allen and Bobby Spear.....			99 pts.
5/8-oz. bait—Tie among J. A. Halblieb, Frank Halper and Don Allen.....			100 pts.
COMBINED CHAMPIONSHIPS			
All-accuracy—Marlon Garber.....		394 pts.	
Accuracy flies—Donald Meyer.....		200 pts.	
All-distance—Jon Tarantino.....		3334 pts.	
Distance baits—William J. Lovely.....		2367	
Distance flies—Jon Tarantino.....		1114	

## ICE HOCKEY

ICE HOCKEY, by birth and upbringing a Canadian game, is an offshoot of field hockey. Some historians state that the first ice hockey game was played in Montreal in December, 1879, between two teams composed almost exclusively of McGill University students, but others assert that Kingston, Ont., or Halifax, N. S., were scenes of earlier hockey games. In the Montreal game of 1879 there were fifteen players on a side and they used an assortment of crude sticks to keep the puck in motion. Early rules allowed nine men on a side but the number was reduced to seven in 1886 and finally reduced to six, the standard of today.

The first governing body of the sport was the Amateur Hockey Association of Canada, organized in 1887. In the winter of 1894-95 a group of college students from the United States visited Canada, saw hockey played, became enthused over the game and introduced it as a winter sport when they returned home. This was the

start of hockey in the United States. The first professional league was the International Hockey League that operated, strangely enough, not in Canada but in northern Michigan in 1904-06 and included as players such famous stars as Cyclone Taylor and Hod Stuart, later included in the Hockey Hall of Fame.

Until 1910, professionals and amateurs were allowed to play together on "mixed teams," but this arrangement ended with the formation of the first "big league," the National Hockey Association, in eastern Canada in 1910. The Pacific Coast League, to provide professional hockey in the West, was organized in 1911 with Seattle (and later other American cities) included in the circuit. The National Hockey League replaced the National Hockey Association in 1917. Boston, in 1924, was the first American city to join that circuit. The Stanley Cup, top trophy of hockey, was competed for by "mixed teams" from 1894 to 1910, thereafter by professionals.

### Professional Statistics

#### STANLEY CUP WINNERS

Emblematic of world professional championship.

1894—Montreal A. A. A.	1909—Ottawa Senators	1925—Victoria Cougars	1941—Boston Bruins
1895—Montreal Victorias	1910—Montreal Wanderers	1926—Montreal Maroons	1942—Toronto Maple Leafs
1896—Winnipeg Victorias	1911—Ottawa Senators	1927—Ottawa Senators	1943—Detroit Red Wings
1897—Montreal Victorias	1912—Quebec Bulldogs	1928—N. Y. Rangers	1944—Montreal Canadiens
1898—Montreal Victorias	1913—Quebec Bulldogs	1929—Boston Bruins	1945—Toronto Maple Leafs
1899—Montreal Victorias	1914—Toronto	1930—Montreal Canadiens	1946—Montreal Canadiens
1900—Montreal Shamrocks	1915—Vancouver Millionaires	1931—Montreal Canadiens	1947—Toronto Maple Leafs
1901—Winnipeg Victorias	1916—Montreal Canadiens	1932—Toronto Maple Leafs	1948—Toronto Maple Leafs
1902—Montreal A. A. A.	1917—Seattle Metropolitans	1933—N. Y. Rangers	1949—Toronto Maple Leafs
1903—Ottawa Silver Seven	1918—Toronto Arenas	1934—Chicago Black Hawks	1950—Detroit Red Wings
1904—Ottawa Silver Seven	1919—Series unfinished†	1935—Montreal Maroons	1951—Toronto Maple Leafs
1905—Ottawa Silver Seven	1920—Ottawa Senators	1936—Detroit Red Wings	1952—Detroit Red Wings
1906—Montreal Wanderers	1921—Ottawa Senators	1937—Detroit Red Wings	1953—Montreal Canadiens
1907—Kenora Thistles	1922—Toronto St. Patricks	1938—Chicago Black Hawks	1954—Detroit Red Wings
1907—Mont. Wanderers*	1923—Ottawa Senators	1939—Boston Bruins	1955—Detroit Red Wings
1908—Montreal Wanderers	1924—Montreal Canadiens	1940—N. Y. Rangers	

\* March.

† The Montreal Canadiens and Seattle, P.C.H.L. champions, had played five games at Seattle, Wash., when an influenza epidemic (which took the life of Joe Hall of the Canadiens) caused the Department of Health to stop the series. Each team won two games, with one contest ending in a tie.

### HOCKEY'S HALL OF FAME

Kingston, Ontario

Ronald H. Bain	Eddie Gerard	Joe Malone	George Richardson
Obey Baker	Frank (Moose) Goheen	Frank McGee	Arthur H. Ross
J. R. (Dickie) Boon	Mike Grant	Howie Morenz	Eddie Shore
Russell Bowie	Silas Griffis	Frank Nighbor	Nelson (Nels) Stewart
Hubrey Clapper	Ernest (Moose) Johnson	Frank Patrick	Hod Stuart
Bill Cook	Aurel Joliat	Lester Patrick	Fred (Cyclone) Taylor
Alan Davidson	E. C. (Newsy) Lalonde	Tom Phillips	Harry J. Trihey
Thomas G. Drinkwater	Duncan (Mickey) MacKay	Harvey Pulford	Georges Vezina
Charles Gardiner			

#### Red Wings Hold Stanley Cup Mark

In 1952 the Detroit Red Wings set a National Hockey League play-off record by

scoring an eight-game sweep to gain the Stanley Cup.



## BASKETBALL

**B**ASKETBALL may be unique in sports. It is one game concerning which it is safe to state when, where and how it originated. In the winter of 1891-92, Dr. James Naismith, an instructor in the Y.M.C.A. Training College (now Springfield College) at Springfield, Mass., deliberately invented the game of basketball in order to provide indoor exercise and competition for the students between the closing of the football season and the opening of the baseball season. He affixed peach baskets overhead on the walls at opposite ends of the gymnasium and, with an association (soccer) football, organized teams to play his new game in which the purpose was to toss the ball into one basket and prevent, as far as possible, the opponents from tossing the ball into the other basket. Fun-

damentally, the game is the same today, though there have been some improvements in equipment and many changes in the rules.

Because Dr. Naismith had eighteen available players when he invented the game, the first rule was: "There shall be nine players on each side." Later the number of players became optional, depending upon the size of the available court, but the five-player standard was adopted when the game spread over the country. United States soldiers introduced the game in Europe in World War I and, being taken up by foreign nations, it soon became a world-wide sport. An odd point is that though it is still chiefly an indoor game in the United States, in other countries it flourishes almost entirely outdoors.

### National Collegiate A. A. Champions

1939—Oregon	1947—Holy Cross
1940—Indiana	1948—Kentucky
1941—Wisconsin	1949—Kentucky
1942—Stanford	1950—C.C.N.Y.
1943—Wyoming	1951—Kentucky
1944—Utah	1952—Kansas
1945—Oklahoma A & M	1953—Indiana
1946—Oklahoma A & M	1954—La Salle
	1955—San Francisco

### Professional Champions

The National Basketball League, formed in 1937, merged with the Basketball Association of America in the summer of 1949. Play in the B. A. A. started in 1946, with teams in ten cities. The current National Basketball Association is the result of the merger. The champions follow:

#### National League

1938—Goodyears
1939-40—Firestones
1941-42—Oshkosh
1943-45—Fort Wayne
1946—Rochester
1947—Chicago
1948—Minneapolis
1949—Anderson

#### Association of America

1947—Philadelphia
1948—Baltimore
1949—Minneapolis

#### National Association

1950—Minneapolis
1951—Rochester
1952—Minneapolis
1953—Minneapolis
1954—Minneapolis
1955—Syracuse

### National Invitation Champions

(Madison Square Garden Tourney)

1938—Temple	1947—Utah
1939—Long Island U.	1948—St. Louis
1940—Colorado	1949—San Francisco
1941—Long Island U.	1950—C.C.N.Y.
1942—West Virginia	1951—Brigham Young
1943—St. John's (Bklyn.)	1952—La Salle (Phila.)
1944—St. John's (Bklyn.)	1953—Seton Hall
1945—DePaul	1954—Holy Cross
1946—Kentucky	1955—Duquesne

### AMERICAN LEAGUE CHAMPIONS

1926—Cleveland Rosenblums
1927—Brooklyn Original Celtics
1928—Brooklyn Original Celtics
1929—Cleveland Rosenblums
1930—Cleveland Rosenblums
1931—Brooklyn Visitations
1932—No competition
1933—No competition
1934—Philadelphia Hebrews
1935—Brooklyn Visitations
1936—Philadelphia Hebrews
1937—Philadelphia Hebrews
1938—Jersey Reds
1939—New York Jewels
1940—Philadelphia Sphas
1941—Philadelphia Sphas
1942—Wilmington
1943—Philadelphia Sphas
1944—Wilmington Bombers
1945—Philadelphia Sphas
1946—Baltimore Bullets
1947—Trenton Tigers
1948—Wilkes-Barre Barons
1949—Wilkes-Barre Barons
1950—Scranton Miners
1951—Scranton Miners
1952—Wilkes-Barre Barons
1953—Manchester (Conn.) Colonels
1954-55—No competition

### San Francisco Sets Victory Mark

The San Francisco Dons, coached by Phil Woolpert, set a collegiate record for consecutive victories when they beat California, 33 to 24, on Jan. 28, 1956. The

triumph was the fortieth in a row for the Dons, who went unbeaten through a 23 game regular season and then won the N.C.A.A. title to extend their skein to 51

## BOWLING

THE GAME OF bowling that is the favorite sport of millions of "keglers" in the United States is an indoor development of the more ancient outdoor game that survives as lawn bowling. The outdoor game is prehistoric in origin and probably goes back to Primitive Man and round stones that were rolled at some target. It is believed that a game something like nine-pins was popular among the Dutch, Swiss and Germans as long ago as A.D. 1200 at which time the game was played outdoors with an alley consisting of a single plank 12 to 18 inches wide along which was rolled a ball toward three rows of three pins each placed at the far end of the alley. When the first indoor alleys were built and how the game was modified from time to time are matters of dispute. Much of the confusion arises from a lack of certainty as to which game is meant, "bowls" or "bowling", one with a "jack" and the other with "pins", in historical passages.

It is supposed that the early settlers of New Amsterdam (New York City) being Dutch, they brought their two bowling games with them. About a century ago the game of nine-pins was flourishing in the United States but so corrupted by gambling on matches that it was barred by law in New York and Connecticut. Since the law specifically barred "nine-pins", it was eventually evaded by adding another pin and thus legally making it a new game. The genius who thought up that simple method of outwitting the law and putting a popular game in motion once more remained modestly anonymous. With the increase in the number of pins, the old diamond formation of nine-pins was abandoned for the triangle set-up of ten-pins that remains the rule to this day. Various organizations were formed to make rules for bowling and supervise competition in the United States but none was successful until the American Bowling Congress, organized Sept. 9, 1895, became the ruling body.

### Bowling Statistics

Source: American Bowling Congress.

#### American Bowling Congress Tournament Records

Type of record	Holder and home city	Score	Year
High team total.....	Birk Bros., Chicago.....	3234	1938
High team game.....	Tea Shop, Milwaukee.....	1186	1927
High doubles total.....	Steve Nagy-John Klares, Cleveland.....	1453	1952
High doubles game.....	J. Gworek—H. Kmidowski, Buffalo.....	544	1946
High singles total.....	Lee Jougard, Detroit.....	775	1951
High all events total.....	Max Stein, Belleville, Ill.....	2070	1937
High 3 games in any event.....	Lee Jougard, Detroit.....	775	1951

#### AMERICAN BOWLING CONGRESS CHAMPIONS

Year	Singles	Score	Doubles	Score
1932	Otto Nitschke, Cleveland, Ohio.....	731	F. Benkovic—C. Daw, Milwaukee, Wis.....	1358
1933	Earl Hewitt, Erie, Pa.....	724	G. Zunker—F. Benkovic, Milwaukee, Wis.....	1415
1934	Jerry Vidro, Grand Rapids, Mich.....	721	G. Rudolph—J. Ryan, Waukegan, Ill.....	1321
1935	Don Brokaw, Canton, Ohio.....	733	C. Summerix—H. Souers, Akron, Ohio.....	1348
1936	Charles Warren, Springfield, Ill.....	735	A. Slanina—M. Straka, Chicago, Ill.....	1347
1937	Gene Gagliardi, Mt. Vernon, N. Y.....	749	V. Gibbs, Kansas City, Mo.—N. Burton, Dallas, Texas	1359
1938	Knute Anderson, Moline, Ill.....	746	D. Johnson—F. Snyder, Indianapolis, Ind.....	1337
1939	Jim Daneke, Forest Park, Ill.....	730	P. Icuss—M. Fowler, Steubenville, Ohio.....	1405
1940	Ray Brown, Terre Haute, Ind.....	742	H. Freitag—J. Sinke, Chicago, Ill.....	1346
1941	Fred Ruff, Belleville, Ill.....	745	W. Lee—R. Farness, Madison, Wis.....	1346
1942	John Stanley, Cleveland, Ohio.....	756	E. Nowicki—G. Baier, Milwaukee, Wis.....	1377
1946	Leo Rollick, Los Angeles, Calif.....	737	J. Gworek—H. Kmidowski, Buffalo, N. Y.....	1366
1947	Junie McMahon, Chicago.....	740	Ed Doerr, Jr.—Len Springmeyer, St. Louis.....	1350
1948	Lincoln Protich, Akron, Ohio.....	721	J. Towns—W. Sweeney, Chicago.....	1361
1949	Bernard Rusche, St. Bernard, Ohio.....	716	D. Van Bozel, Green Bay—E. Bernhardt, Sturgeon Bay	1332
1950	Everett Leins, Aurora, Ill.....	757	W. Ebosh—E. Linsz, Cleveland.....	1325
1951	Lee Jougard, Detroit, Mich.....	775	Bob Benson—Ed Marshall, Lansing, Mich.....	1334
1952	Al Sharkey, Chicago.....	758	Steve Nagy-John Klares, Cleveland.....	1453
1953	Frank Santore, Long Island City, N. Y.....	749	Eddie Koep—Joe Kissoff, Cleveland.....	1339
1954	Tony Sparano, Rego Park, N. Y.....	723	Don McClaren, St. Louis—Billy Welu, Houston.....	1305
1955	Eddie Gerzine, Milwaukee.....	738	G. Pacropolis—H. Zoeller, Wilkes Barre, Pa.....	1365

## American Bowling Congress Champions (cont.)

Year	All-events	Score	Team	Score
1933	Gil Zunker, Milwaukee, Wis.	2060	Flaig Opticians, Covington, Ky.	3022
1934	Walt Reppenhagen, Detroit, Mich.	1972	Strohs, Detroit, Mich.	3089
1935	Ora Moyer, San Francisco, Calif.	2022	Wolfe Tire Service, Niagara Falls, N. Y.	3024
1936	John Murphy, Indianapolis, Ind.	2006	Falls City Hi-Bru, Indianapolis, Ind.	3089
1937	Max Stein, Belleville, Ill.	2070	Krakow Furniture, Detroit, Mich.	3114
1938	Don Beatty, Jackson, Mich.	1978	Birk Bros., Chicago, Ill.	3223
1939	Joe Wilman, Chicago, Ill.	2028	Fife Electric, Detroit, Mich.	3121
1940	Fred Fisher, Buffalo, N. Y.	2001	Monarch Beer, Chicago, Ill.	3044
1941	Harold Kelly, South Bend, Ind.	2013	Vogel Bros., Forest Park, Ill.	3064
1942	Stan Moskal, Saginaw, Mich.	1973	Budweiser, Chicago, Ill.	3133
1946	Joe Wilman, Chicago, Ill.	2054	Lto-da-mar Bowl, Santa Monica, Calif.	3022
1947	Junie McMahon, Chicago	1965	Eddie and Earl Linsz, Cleveland, Ohio	3033
1948	Ned Day, West Allis, Wis.	1979	Washington Shirts, Chicago	3003
1949	John Small, Chicago	1941	Jimmie Smith's, South Bend, Ind.	3023
1950	Frank Santore, Long Island City, N. Y.	1981	Pepsi-Cola, Detroit	2954
1951	Tony Lindeman, Detroit	2005	C. B. O'Malley Oldsmobile, Chicago	3077
1952	Steve Nagy, Cleveland, Ohio	2065	E & B Beer, Detroit, Mich.	3111
1953	Frank Santore, Long Island City, N. Y.	1994	Pfeiffer Beer, Detroit	3187
1954	Brad Lewis, Ashland, Ohio	1985	Tri-Par Radio, Chicago	3222
1955	Fred Bujack, Detroit	1993	Pfeiffer Beer, Detroit	3193

## WOMAN'S INTERNATIONAL BOWLING CONGRESS CHAMPIONS

Source: Emma Pfäfer, Secretary, Woman's International Bowling Congress, Inc.

Year	Singles	Score	Doubles	Score
1933	Mrs. Sally Twyford, Aurora, Ill.	628	V Peters—M. Kite, Syracuse, N. Y.	1133
1934	Marie Clemensen, Chicago	712	F. Tretlin—D. McQuade, Chicago	1193
1935	Marie Warmbier, Chicago	652	E. Hauffier—B. Simon, San Antonio	1217
1936	Mrs. Ella Burmeister, Madison, Wis.	612	Mrs. A. Lindermann—Mrs. L. Baldy, Milwaukee	1111
1937	Mrs. Anna Gottstine, Buffalo	647	L. Franke—G. Weber, Fort Wayne	1233
1938	Mrs. Rose Warner, Waukegan, Ill.	622	F. Probert—E. Sablatnik, St. Louis	1217
1939	Helen Hengstler, Detroit	626	C. Powers—B. Reus, Grand Rapids	1113
1940	Mrs. Sally Twyford, Aurora, Ill.	626	T. Morris—D. Burmeister Miller, Chicago	1183
1941	Nancy Huff, Los Angeles	682	J. Pittinger—M. J. Hogan, Los Angeles	1113
1942	Tillie Taylor, Newark, N. J.	659	S. Hartrick—C. Allen, Detroit	1203
1946	Val Mikiel, Detroit	682	V. Focazio—P. Dusher, Niagara Falls, N. Y.	1233
1947	Agnes Junker, Indianapolis, Ind.	650	Candice Miller—E. Beard, Ft. Wayne, Ind.	1243
1948	Shirlee Wernecke, Chicago	696	M. Cass, Alhambra—M. Mathews, Long Beach, Calif.	1113
1949	Clara Mataya, St. Louis	658	Ann Elyasevich—Estelle Svoboda, Chicago	1223
1950	Cleo Stalkamp, Newport, Ky.	669	Shirley Gantenben—Flo Schick, Dallas	1213
1951	Ida Simpson, Buffalo, N. Y.	639	Esther Cook—Alma Denini, Seattle	1113
1952	Lorene Craig, Kansas City, Mo.	672	Lorraine Quam—Martha Hoffman, Madison, Wis.	1203
1953	Marge Baginski, Berwyn, Ill.	637	Doris Knechtges—Jane Grudzien, Detroit	1223
1954	Mrs. Helen Martin, Peoria, Ill.	668	Frances Stennett—Rose Gacioch, Rockford, Ill.	1243
1955	Nellie Vella, Rockford, Ill.	695	Wyllis Ryskamp—Mrs. M. Ladewig, Grand Rapids	1263

Year	All-events	Score	Team	Score
1933	Mrs. Sally Twyford, Aurora, Ill.	1765	Alberti Jewelers, Chicago	2863
1934	Mrs. Esther Ryan, Milwaukee	1763	Tommy Dolls Five, Cincinnati	2653
1935	Marie Warmbier, Chicago	1911	Alberti Jewelers, Chicago	2713
1936	Mrs. Ella Burmeister, Madison, Wis.	1683	Easty Five, Cleveland	2633
1937	Mrs. Louise Stockdale, Detroit	1761	The Heil Uniform Heat, Milwaukee	2683
1938	Dorothy Burmeister, Chicago	1843	The Heil Uniform Heat, Milwaukee	2743
1939	Ruth Troy, Dayton, Ohio	1724	Kornitz Pure Oil, Milwaukee	2683
1940	Mrs. Tess Morris, Chicago	1777	Logan Square Buicks, Chicago	2663
1941	Mrs. Sally Twyford, Aurora, Ill.	1799	Rovick Bowling Shoes, Chicago	2683
1942	Nina Van Camp, Chicago	1888	Logan Square Buicks, Chicago	2813
1946	Catherino Fellmeth, Chicago	1835	Silver Seal Soda, St. Louis	2713
1947	Marge Dardeen, Cincinnati	1826	Kornitz Pure Oil, Milwaukee	2983
1948	Virgie Hupfer, Burlington, Iowa	1850	Kathryn Creme Pact, Chicago	2823
1949	Cecelia Winandy, Chicago	1840	Gears by Enterprise, Detroit	2713
1950	Marion Ladewig, Grand Rapids, Mich.	1796	Fanitorium Majors, Grand Rapids, Mich.	2913
1951	LaVerne Haverley, Los Angeles	1788	Hickman Oldsmobile Whirlaway, Indianapolis	2713
1952	Mrs. Virginia Turner, Gardena, Calif.	1854	Cole Furniture, Cleveland	2813
1953	Doris Knechtges, Detroit	1886	B. & B. Chevrolet, Detroit	2913
1954	Anne Johnson, Hazleton, Pa.	1880	Marhofer Weiners, Chicago	2713
1955	Mrs. Marion Ladewig, Grand Rapids, Mich.	1890	Fallstaff, Chicago	2913





CYCLING

Source: Otto Elsele, Racing Editor, *American Bicyclist*.

WORLD RECORDS

OUTDOOR PROFESSIONAL

Unpaced Standing Start

Distance	Holder and country	Where made	Year	Time
1 kilometer	R. H. Harris, Great Britain	Milan	1952	1:08 <sup>3</sup> / <sub>5</sub>
5 kilometers	G. Messina, Italy	Milan	1955	6:17 <sup>4</sup> / <sub>5</sub>
	* R. Strehler, Switzerland	Milan	1956	6:08 <sup>4</sup> / <sub>5</sub>
10 kilometers	M. Archambaud, France	Milan	1937	12:53
20 kilometers	M. Archambaud, France	Milan	1937	25:59 <sup>3</sup> / <sub>5</sub>
	* J. Anquetil, France	Milan	1956	25:57 <sup>1</sup> / <sub>5</sub>
100 kilometers	M. de Benedetti, Italy	Milan	1942	2:20:44 <sup>4</sup> / <sub>5</sub>
1 hour	F. Coppi, Italy	Milan	1942	28 mi. 805 yds.
	* J. Anquetil, France	Milan	1956	28 mi. 1,201 yds.

INDOOR PROFESSIONAL

Unpaced Standing Start

1 kilometer	R. H. Harris, Great Britain	Paris	1952	1:09 <sup>1</sup> / <sub>5</sub>
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OUTDOOR AMATEUR (Unpaced Standing Start)

1 kilometer	R. Vargachin, Russia	Irkutsk	1955	1:09 5/10
	* L. Faggini, Italy	Milan	1956	1:09 <sup>1</sup> / <sub>5</sub>
5 kilometers	A. Kazianka, Italy	Milan	1954	6:25 <sup>3</sup> / <sub>5</sub>
	* L. Faggini, Italy	Milan	1956	6:15 <sup>3</sup> / <sub>5</sub>
10 kilometers	F. Aureggi, Italy	Milan	1952	13:03 <sup>3</sup> / <sub>5</sub>
	* E. Baldini, Italy	Milan	1956	12:37 <sup>3</sup> / <sub>5</sub>
20 kilometers	E. Baldini, Italy	Milan	1954	26:29 <sup>3</sup> / <sub>5</sub>
	* E. Baldini, Italy	Milan	1956	25:20 <sup>3</sup> / <sub>5</sub>
100 kilometers	A. Milesi, Italy	Milan	1954	2:29:08 <sup>1</sup> / <sub>5</sub>
1 hour	E. Baldini, Italy	Milan	1954	27 mi. 1,550 yds.
	* E. Baldini, Italy	Milan	1956	28 mi. 1,458 yds.

\* Subject to approval by Union Cycliste Internationale Congress.

INDOOR AMATEUR

Unpaced Standing Start

1 kilometer	F. Galignard, France	Paris	1954	1:10 <sup>1</sup> / <sub>5</sub>
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AMATEUR BICYCLE LEAGUE OF AMERICA RECORDS

ROAD COMPETITION—SCRATCH

Distance, mi.	Time	Record-holder and where made	Date
1/4	:29 2/5	B. W. King, Atlantic City, N. J.	Sept. 16, 1922
1/3	:38 3/5	Charles Winters, Chicago, Ill.	Sept. 8, 1922
1/2	1:04 3/5	John Leahy, Louisville, Ky.	Sept. 11, 1922
		Henry Surman	
1	2:02	R. L. Guthridge	Westfield, N. J.
		S. C. Haberle	Aug. 8, 1900
2	4:46 1/5	Theodore Becker, Louisville, Ky.	Sept. 10, 1922
3	7:18 2/5	Don Sheldon, Columbus, Ohio	Aug. 18, 1944
5	11:38	Vaughan Angell, Columbus, Ohio	Aug. 4, 1955
10	23:22 1/5	Gus Gatto, Columbus, Ohio	Aug. 5, 1955
15	34:14 3/5	Francois Mertens, Washington, D. C.	Aug. 1955
20	45:22	A. E. Wahl, Buffalo, N. Y.	July 4, 1922
25	1:01:00 2/5	Rupert Waltl, Belleville, N. J.	May 1955
50	2:02:00	Leo Adams, Buffalo, N. Y.	July 14, 1933
100	4:33:25 1/5	Louis Maltese, Union City, N. J., to South Philadelphia, Pa.	June 6, 1922
125	6:20:20 4/5	Don Sheldon, Old Westbury, N. Y.	Oct. 19, 1944
*125	5:49:00	Bernard Dodd, San Francisco, Calif.	Aug. 1955
200	9:56:49	Everett Cassagneres, Pittsburgh, Pa.	Oct. 4, 1955

\* Pending record committee approval.

## ICE (FIGURE) SKATING

Source: Art Goodfellow, Editor, National Sports Publications, 7 Park Ave., New York, N. Y.

### WORLD CHAMPIONS

Year	Men	Women
1896	Gilbert Fuchs, Germany	
1897	Gustav Hugel, Austria	
1898	H. Grenander, Sweden	
1899	Gustav Hugel, Austria	
1900	Gustav Hugel, Austria	
1901	Ulrich Salchow, Sweden	
1902	Ulrich Salchow, Sweden	
1903	Ulrich Salchow, Sweden	
1904	Ulrich Salchow, Sweden	
1905	Ulrich Salchow, Sweden	
1906	Gilbert Fuchs, Germany	Madge Syers, England
1907	Ulrich Salchow, Sweden	Madge Syers, England
1908	Ulrich Salchow, Sweden	Lily Kronberger, Hungary
1909	Ulrich Salchow, Sweden	Meray Horvath, Hungary
1910	Ulrich Salchow, Sweden	Lily Kronberger, Hungary
1911	Ulrich Salchow, Sweden	Lily Kronberger, Hungary
1912	Fritz Kachler, Austria	Meray Horvath, Hungary
1913	Fritz Kachler, Austria	Meray Horvath, Hungary
1914	Gosta Sandahl, Sweden	Meray Horvath, Hungary
1915-21	No competition	No competition
1922	Gillis Grafstrom, Sweden	Mrs. Szabo Plank, Austria
1923	Fritz Kachler, Austria	Mrs. Szabo Plank, Austria
1924	Gillis Grafstrom, Sweden	Mrs. Szabo Plank, Austria
1925	Willi Boeckl, Austria	Mrs. Szabo Plank, Austria
1926	Willi Boeckl, Austria	Mrs. Szabo Plank, Austria
1927	Willi Boeckl, Austria	Sonja Henie, Norway
1928	Willi Boeckl, Austria	Sonja Henie, Norway
1929	Gillis Grafstrom, Sweden	Sonja Henie, Norway
1930	Karl Schafer, Austria	Sonja Henie, Norway
1931	Karl Schafer, Austria	Sonja Henie, Norway
1932	Karl Schafer, Austria	Sonja Henie, Norway
1933	Karl Schafer, Austria	Sonja Henie, Norway
1934	Karl Schafer, Austria	Sonja Henie, Norway
1935	Karl Schafer, Austria	Sonja Henie, Norway
1936	Karl Schafer, Austria	Sonja Henie, Norway
1937	Felix Kaspar, Austria	Cecilia Colledge, England
1938	Felix Kaspar, Austria	Megan Taylor, England
1939	Graham Sharp, England	Megan Taylor, England
1940-46	No competition	No competition
1947	Hans Gersweiler, Switzerland	Barbara A. Scott, Canada
1948	Richard Button, U. S.	Barbara A. Scott, Canada
1949	Richard Button, United States	Aja Vrzanova, Czechoslovakia
1950	Richard Button, U. S.	Aja Vrzanova, Czech.
1951	Richard Button, United States	Jeannette Altwegg, England

1952	Richard Button, U. S.	Jacqueline du Bief, France
1953	Hayes A. Jenkins, U. S.	Tenley Albright, U. S.
1954	Hayes A. Jenkins, U. S.	Gundi Busch, Germany
1955	Hayes A. Jenkins, U. S.	Tenley Albright, U. S.

### UNITED STATES CHAMPIONS

Year	Men	Women
1914	Norman Scott	Theresa Weld
1915-17	No competition	No competition
1918	Nathaniel Niles	Mrs. R. S. Beresford
1919	No competition	No competition
1920	Sherwin Badger	Theresa Weld
1921	Sherwin Badger	Theresa Blanchard
1922	Sherwin Badger	Theresa Blanchard
1923	Sherwin Badger	Theresa Blanchard
1924	Sherwin Badger	Theresa Blanchard
1925	Nathaniel Niles	Beatrice Loughran
1926	C. I. Christenson	Beatrice Loughran
1927	Nathaniel Niles	Beatrice Loughran
1928	Roger Turner	Maribel Y. Vinson
1929	Roger Turner	Maribel Y. Vinson
1930	Roger Turner	Maribel Y. Vinson
1931	Roger Turner	Maribel Y. Vinson
1932	Roger Turner	Maribel Y. Vinson
1933	Roger Turner	Maribel Y. Vinson
1934	Roger Turner	Suzanne Davis
1935	Robin Lee	Maribel Y. Vinson
1936	Robin Lee	Maribel Y. Vinson
1937	Robin Lee	Maribel Y. Vinson
1938	Robin Lee	Joan Tozzer
1939	Robin Lee	Joan Tozzer
1940	Eugene Turner	Joan Tozzer
1941	Eugene Turner	Jane Vaughn
1942	Bobby Specht	Jane V. Sullivan
1943	Arthur R. Vaughn, Jr.	Gretchen Merrill
1944	Omitted	Gretchen Merrill
1945	Omitted	Gretchen Merrill
1946	Richard Button	Gretchen Merrill
1947	Richard Button	Gretchen Merrill
1948	Richard Button	Gretchen Merrill
1949	Richard Button	Yvonne Sherman
1950	Richard Button	Yvonne Sherman
1951	Richard Button	Sonya Klopfer
1952	Richard Button	Tenley Albright
1953	Hayes A. Jenkins	Tenley Albright
1954	Hayes A. Jenkins	Tenley Albright
1955	Hayes A. Jenkins	Tenley Albright

## NATIONAL AMATEUR CYCLING CHAMPIONS

Source: Amateur Bicycle League of America, Inc.

Year	Winner	Where held	Year	Winner	Where held
1921	Arthur Nieminsky, New York	Washington, D. C.	1939	Martin Deras, California	Columbus
1922	Carl Hambacher, New Jersey	Atlantic City	1940	Furman Kugler, New Jersey	Detroit
1923	Charles Barclay, California	Chicago	1941	Marvin Thomson, Illinois	Pasadena, Calif.
1924	Charlie Winter, New York	Buffalo	1945	Ted Smith, New York	Chicago
1925	Edward Merkner, Illinois	St. Louis	1946	Don Hester, California	Columbus
1926	Edward Merkner, Illinois	Philadelphia	1947	Ted Smith, New York	Philadelphia
1927	Jimmy Walthour, Jr., New York	Louisville	1948	Ted Smith, New York	Kenosha, Wis.
1928	R. J. Connor, District of Columbia	Kenosha, Wis.	1949	James Lauf, Maryland	San Diego, Calif.
1929	Sergio Matteini, New York	Newark, N. J.	1950	Robert Pfarr, Wisconsin	New Brunswick
1930	Bobby Thomas, Wisconsin	Kenosha, Wis.	1951	Gus Gatto, California	Columbus
1935	Cecil Hursey, Georgia	Atlantic City	1952	Steve Hromjak, Ohio	New Brunswick
1936	Jackie Simes, New Jersey	St. Louis	1953	Ronald Rhoads, California	St. Louis
1937	Charles Bergna, New Jersey	Buffalo	1954	Jack Disney, California	Minneapolis
			1955	Jack Disney, California	New York



## ICE (SPEED) SKATING

## WORLD RECORDS

Source: International Skating Union (I.S.U.).

MEN					
Meters	Time	Recordholder and country	Where made	Date	
500 .....	0:40.2 .....	Eugeny Grishin, U.S.S.R. ....	Lake Misurina, Italy.....	Jan.	22, 1956
	0:40.2 .....	Eugeny Grishin, U.S.S.R. ....	Lake Misurina, Italy.....	Jan.	28, 1956
1,000 .....	1:22.8 .....	Eugeny Grishin, U.S.S.R. ....	Alma Ata, U.S.S.R. ....	Jan.	12, 1955
1,500 .....	2:08.6 .....	Eugeny Grishin, U.S.S.R. ....	Lake Misurina, Italy.....	Jan.	30, 1956
	2:08.6 .....	Jurij Michailov, U.S.S.R. ....	Lake Misurina, Italy.....	Jan.	30, 1956
3,000 .....	4:40.2 .....	Anton Huiskes, Holland.....	Davos, Switz.....	Jan.	24, 1953
5,000 .....	7:45.6 .....	Boris Shilkov, U.S.S.R. ....	Alma Ata, U.S.S.R. ....	Jan.	9, 1955
10,000 .....	16:32.6 .....	Hjalmar Andersen, Norway....	Hamar, Norway.....	Feb.	10, 1952
All-around .....	184.638 pts.....	Dimitry Sakunenko, U.S.S.R. ....	Alma Ata, U.S.S.R. ....	Jan.	9-10, 1955

## WOMEN

500 .....	0:45.6 .....	Tamara Rilova, U.S.S.R. ....	Alma Ata, U.S.S.R. ....	Jan.	11, 1955
1,000 .....	1:33.4 .....	Tamara Rilova, U.S.S.R. ....	Alma Ata, U.S.S.R. ....	Jan.	12, 1955
1,500 .....	2:25.5 .....	Khalida Schegolewa, U.S.S.R. ....	Alma Ata, U.S.S.R. ....	Jan.	30, 1953
3,000 .....	5:13.8 .....	Rimma Zhukowa, U.S.S.R. ....	Alma Ata, U.S.S.R. ....	Jan.	23, 1953
5,000 .....	9:01.6 .....	Rimma Zhukowa, U.S.S.R. ....	Alma Ata, U.S.S.R. ....	Jan.	24, 1953
All-around .....	206.016 pts.....	Innga Artamonova, U.S.S.R. ....	Sverdlovsk, U.S.S.R. ....	Mar.	5-6, 1956

## NATIONAL SENIOR AMATEUR RECORDS

(Made in competition)

Source: Amateur Skating Union of the United States.

## MEN'S OUTDOOR

Event	Time	Holder	Place	Date
220 yd...	18.1	Robert Fitzgerald...	Minneapolis...	1/10/43
440 yd...	35.4	Charles Gorman...	Lake Placid...	2/14/27
	35.4	Ken Bartholomew...	St. Paul.....	1/25/42
	35.4	Robert Fitzgerald...	Minneapolis...	2/15/42
880 yd...	1:14.2	Robert Fitzgerald...	Minneapolis...	1/7/45
¼ mi....	1:55.8	Clas Thunberg....	Saranac Lake...	2/15/26
1 mi....	2:38.2	Clas Thunberg....	Lake Placid...	2/12/26
*1 mi....	2:29.7	Del Lamb.....	Oslo.....	2/19/48
2 mi....	5:33.8	Eddie Schroeder...	Minneapolis...	1/30/34
3 mi....	8:19.6	Ross Robinson....	Lake Placid...	2/14/30
5 mi....	14:30.4	Ross Robinson....	Lake Placid...	2/12/27

\* Made on 400-meter track in Norway.

BEST TIMES BY AMERICANS  
AT OLYMPIC DISTANCES

500 m....	41.3	William Carow....	Lake Misurina 1/22/56
			Italy
1,500 m..	2:15.2	Pat McNamara....	Lake Misurina 1/30/56
			Italy
5,000 m..	8:10.6	Pat McNamara....	Lake Misurina 1/29/56
			Italy
10,000 m.	17:45.9	Eddie Schroeder	

## WOMEN'S OUTDOOR

220 yd...	20.2	Maddy Horn....	Saranac Lake...	2/11/39
		Pat Gibson.....	St. Paul.....	1/30/55
440 yd...	39.4	L. Neitzel.....	Minneapolis...	2/3/29
880 yd...	1:25.9	Maddy Horn.....	Escanaba*....	1/13/40
¼ mi....	2:17	Dot Franey.....	Minneapolis...	1/16/37
1 mi....	3:06.1	Maddy Horn.....	Oconomowoc†	1/24/37

\* Michigan. † Wisconsin.

## WOMEN'S INDOOR

## FOR TRACKS 12 LAPS AND UNDER

220 yd...	21.6	Dot Franey.....	St. Paul.....	2/15/36
¼ mi....	31.0	Dot Franey.....	St. Louis.....	2/25/33
440 yd...	41.6	Dot Franey.....	St. Paul.....	2/16/36
880 yd...	1:26.7	B. M. DeSchepper	Champaign...	Mar. '54
¾ mi....	2:18.1	Kit Klein.....	Chicago.....	2/2/35
1 mi....	3:10.7	B. M. DeSchepper	Champaign...	Mar. '54

## FOR TRACKS 13 LAPS AND OVER

440 yd...	42	B. M. DeSchepper	Edmonton	4/23-25/53
½ mi....	1:26.4	B. M. DeSchepper	Milwaukee...	3/5-6/55
¾ mi....	2:17.3	Pat Underhill....	Milwaukee...	3/5-6/55
1 mi....	3:07.2	Pat Underhill....	Edmonton	4/23-25/53

## MEN'S INDOOR

## FOR TRACKS 12 LAPS AND UNDER

Event	Time	Holder	Place	Date
220 yd...	18	F. Robson.....	Boston.....	1/13/11
¼ mi....	23.8	C. Gorman.....	St. John*....	3/1/27
440 yd...	36.8	C. Gorman.....	St. John.....	2/27/25
880 yd...	1:15.6	B. O'Sickey.....	Pittsburgh...	3/1/16
¾ mi....	2:00.4	P. Johnston.....	Cleveland...	3/2/28
1 mi....	2:41.2	Morris Wood-		
		F. Robson.....	Pittsburgh...	2/13/04
1½ mi....	4:25	Edmund Lamy...	Cleveland...	1/27/10
2 mi....	5:54.8	R. Heckenbach...	St. Paul.....	1/30/37
3 mi....	8:58.8	P. Johnston.....	Pittsburgh...	2/19/27
4 mi....	13:41.8	Joe Moore.....	Brooklyn...	2/7/27
5 mi....	15:42.2	F. Stack.....	Chicago.....	2/8/30

\* New Brunswick, Canada.

## FOR TRACKS 13 LAPS AND OVER

440 yd...	39	Robert Olson....	Edmonton	4/23-25/49
880 yd...	1:21.7	T. G. Hutchinson...	Colo. Springs	4/23/49
¾ mi....	2:06.2	E. Babayan.....	Colo. Springs	2/18/50
1 mi....	2:49.5	Edgar Dame.....	Edmonton	4/23-25/53
2 mi....	6:02.3	Edgar Dame.....	E. Lansing	3/28-29/52

## SOCCER

Source: Flannery News Bureau of New York.

### National Challenge Cup Winners

Emblematic of United States  
Championship.

(Senior amateur and professional elevens eligible for tournaments.)

- 1914 Brooklyn (N. Y.) Field Club
- 1915 Bethlehem (Pa.) Steel Co. F. C.
- 1916 Bethlehem (Pa.) Steel Co. F. C.
- 1917 Fall River (Mass.) Rovers
- 1918 Bethlehem (Pa.) Steel Co. F. C.
- 1919 Bethlehem (Pa.) Steel Co. F. C.
- 1920 Ben Miller F. C., St. Louis, Mo.
- 1921 Robins Dry Dock F. C., Brooklyn, N. Y.
- 1922 Scullin Steel F. C., St. Louis, Mo.
- 1923 Paterson (N. J.) F. C.
- 1924 Fall River (Mass.) F. C.
- 1925 Shawsheen S. C., Andover, Mass.
- 1926 Bethlehem (Pa.) Steel Co. F. C.
- 1927 Fall River (Mass.) F. C.
- 1928 New York Nationals S. C.
- 1929 Hakoah All-Stars, New York
- 1930 Fall River (Mass.) F. C.
- 1931 Fall River (Mass.) F. C.
- 1932 New Bedford (Mass.) F. C.
- 1933 Stix, Baer & Fuller F. C., St. Louis, Mo.
- 1934 Stix, Baer & Fuller F. C., St. Louis, Mo.
- 1935 Central Breweries S. C., St. Louis, Mo.
- 1936 First German American S. C., Philadelphia
- 1937 New York Americans S. C.
- 1938 Sparta A. B. A., Chicago, Ill.
- 1939 St. Mary's Celtic S. C., New York
- 1940 No official champion\*
- 1941 Pawtucket (R. I.) F. C.
- 1942 Gallatin S. C., Pittsburgh
- 1943 Brooklyn (N. Y.) Hispano S. C.
- 1944 Brooklyn (N. Y.) Hispano S. C.
- 1945 Brookhattan S. C., New York
- 1946 Vikings, Chicago
- 1947 Ponta Delgada F. C., Fall River, Mass.
- 1948 Joe Simpkins S. C., St. Louis, Mo.
- 1949 Morgan (Pa.) S. C.
- 1950 Joe Simpkins S. C., St. Louis, Mo.
- 1951 German-Hungarian S. C., New York
- 1952 Harmorville (Pa.) S. C.
- 1953 Chicago Falcons
- 1954 New York Americans
- 1955 Eintracht S. C., New York

\* Finalists: Baltimore (Md.) S. C. and Sparta A. B. A., Chicago, Ill.

### HICKOK AWARD WINNERS

The richest award in sports is the \$10,000 Ray Hickok Belt, which annually goes to the professional athlete of the year, as selected in a poll of sportswriters and sportscasters throughout the country. The winners:

- 1950—Phil Rizzuto (baseball)
- 1951—Allie Reynolds (baseball)
- 1952—Rocky Marciano (boxing)
- 1953—Ben Hogan (golf)
- 1954—Willie Mays (baseball)
- 1955—Otto Graham (football)

### National Amateur Challenge Cup Winners

- 1923 No official champion\*
- 1924 Fleisher Yarn F. C., Philadelphia
- 1925 Toledo (Ohio) F. C.
- 1926 Defenders F. C., New Bedford, Mass.
- 1927 Heidelberg (Pa.) F. C.
- 1928 No official champion†
- 1929 Heidelberg (Pa.) F. C.
- 1930 Raffies F. C., Fall River, Mass.
- 1931 Goodyear F. C., Akron, Ohio
- 1932 Shamrock S. C., Cleveland, Ohio
- 1933 German American S. C., Philadelphia
- 1934 German American S. C., Philadelphia
- 1935 W. W. Riehl S. C., Castle Shannon, Pa.
- 1936 First German S. C., Brooklyn, N. Y.
- 1937 Highlander F. C., Trenton, N. J.
- 1938 Ponta Delgada F. C., Fall River, Mass.
- 1939 St. Michael's A. C., Fall River, Mass.
- 1940 Morgan-Strasser S. C., Morgan, Pa.
- 1941 Fall River (Mass.) S. C.
- 1942 Fall River (Mass.) S. C.
- 1943 Morgan-Strasser S. C., Morgan, Pa.
- 1944 Eintracht S. C., New York
- 1945 Eintracht S. C., New York
- 1946 Ponta Delgada F. C., Fall River, Mass.
- 1947 Ponta Delgada F. C., Fall River, Mass.
- 1948 Ponta Delgada F. C., Fall River, Mass.
- 1949 Elizabeth (N. J.) Sport Club
- 1950 Ponta Delgada F. C., Fall River, Mass.
- 1951 German-Hungarian S. C., New York
- 1952 St. Louis Raiders
- 1953 Ponta Delgada, Fall River, Mass.
- 1954 Beadling (Pa.) S. C.
- 1955 Heidelberg (Pa.) Tornados

\* Medals to semifinalists: Fleisher Yarn F. C., Philadelphia; Roxbury (Mass.) F. C.; Jeannette (Pa.) F. C.; Swedish American A. A., Chicago, Ill. † Finalists: Powers-Hudson-Essex F. C., Fall River, Mass.; and Swedish American A. C., Detroit, Mich.

### National Baseball Congress Champions

- 1935—Bismarck (N. D.) Corwin-Churchill
- 1936—Duncan (Okla.) Halliburtons
- 1937—Enid (Okla.) Eason Oilers
- 1938—Buford (Ga.) Bona Allens
- 1939—Duncan (Okla.) Halliburtons
- 1940-41—Enid (Okla.) Champlins
- 1942—Wichita (Kans.) Boeing Bombers
- 1943—Camp Wheeler (Ga.) Spokes
- 1944—Sherman Field (Kans.) Flyers
- 1945—Enid (Okla.) Army Air Field
- 1946—St. Joseph (Mich.) Autos
- 1947—Ft. Wayne (Ind.) General Electrics
- 1948—Ft. Wayne (Ind.) General Electrics
- 1949—Ft. Wayne (Ind.) General Electrics
- 1950—Ft. Wayne (Ind.) Capeharts
- 1951—Sinton (Texas) Plymouth Oilers
- 1952—Fort Myer (Va.) Colonials
- 1953—Fort Leonard Wood (Mo.)
- 1954—Wichita (Kans.) Boeing Bombers
- 1955—Wichita (Kans.) Boeing Bombers

# DOG SHOWS

Source: The American Kennel Club.

## Morris and Essex Kennel Club Exhibition

Year	Best in show	Breed	Owner
1927	Ch. Higgins' Red Pat.	Irish setter.	William W. Higgins
1928	Ch. Delf Discriminate of Pinegrade.	Sealyham terrier.	Pinegrade Kennels
1929	Ch. Little Emir.	Pomeranian.	Mrs. V. Matta
1930	Ch. Weltona Frizzette of Wildoaks.	Fox terrier, wire.	Mr. and Mrs. R. C. Bondy
1931	Ch. Fionne v Loheland of Walnut Hall.	Great dane.	Harkness Edwards
1932	Ch. Lone Eagle of Earlsmoor.	Fox terrier, wire.	Dr. and Mrs. S. Milbank
1933	Eppingville of Blarney.	Fox terrier, wire.	John G. Bates
1934	Ch. Gunside Babs of Hollybourne.	Sealyham terrier.	S. L. Froelich
1935	Ch. Milson O'Boy.	Irish setter.	Mrs. Cheever Porter
1936	Ch. Mr. Reynal's Monarch.	Harrier.	Amory L. Haskell
1937	Ch. Sturdy Max.	English setter.	Maridor Kennels
1938	Ch. Ideal Weather.	Old English sheep dog.	Leonard Collins
1939	Ch. My Own Brucie.	Cocker spaniel.	H. E. Mellenthin
1940	Ch. Blakeen Jung Frau.	Poodle, standard.	Blakeen Kennels
1941	Ch. Nornay Saddler.	Fox terrier, smooth.	Wissaboo Kennels
1946	Ch. Benbow's Beau.	Cocker spaniel.	Robert A. Gusman
1947-48	Rock Ridge Night Rocket.	Bedlington terrier.	Mr. and Mrs. W. A. Rockefeller
1949	Ch. Walsing Winning Trick of Edgerstoune.	Scottish terrier.	Mrs. John G. Winant
1950	Ch. Tyronne Farm Clancy.	Irish setter.	Jack Spear
1951	Ch. Rock Falls Colonel.	English setter.	William T. Holt
1952	Ch. Wyretex Wyns Traveller of Trucote.	Fox terrier, wire.	Mrs. Leonard Smit
1953	Ch. Rancho Dobe's Storm.	Doberman pinscher.	Mr. and Mrs. Len Carey
1955	Ch. Baroque of Quality Hill.	Boxer.	Mr. and Mrs. John P. Wagner

## Westminster Kennel Club Exhibition

1907-09	Ch. Warren Remedy.	Fox terrier, smooth.	Winthrop Rutherford
1910	Ch. Sabine Rarebit.	Fox terrier, smooth.	Sabine Kennels
1911	Ch. Tickle Em Jock.	Scottish terrier.	A. Albright, Jr.
1912	Ch. Kenmore Sorceress.	Airedale terrier.	William P. Wolcott
1913	Ch. Strathway Prince Albert.	Bulldog.	Alex H. Stewart
1914	Ch. Brentwood Hero.	Old English sheep dog.	Mrs. Tyler Morse
1915-16	Ch. Matford Vic.	Fox terrier, wire.	George W. Quintard
1917	Ch. Conejo Wycollar Boy.	Fox terrier, wire.	Mrs. Roy A. Rainey
1918	Ch. Haymarket Faultless.	Bull terrier.	R. H. Elliot
1919	Ch. Briergate Bright Beauty.	Airedale terrier.	G. L. L. Davis
1920	Ch. Conejo Wycollar Boy.	Fox terrier, wire.	Mrs. Roy A. Rainey
1921	Ch. Midkiff Seductive.	Cocker spaniel.	William T. Payne
1922	Ch. Boxwood Barkentine.	Airedale terrier.	Frederic C. Hood
1924	Ch. Barberryhill Bootlegger.	Sealyham terrier.	Bayard Warren
1925	Ch. Governor Moscow.	Pointer.	Robert F. Maloney.
1926	Ch. Signal Circuit.	Fox terrier, wire.	Halleston Kennels
1927	Ch. Pinegrade Perfection.	Sealyham terrier.	Frederic C. Brown
1928	Ch. Talavera Margaret.	Fox terrier, wire.	R. M. Lewis
1929	Land Loyalty of Bellhaven.	Collie.	Mrs. Florence B. Iich
1930-31	Ch. Pendley Calling of Blarney.	Fox terrier, wire.	John G. Bates
1932	Ch. Nancolleth Markable.	Pointer.	Giralda Farms
1933	Ch. Warland Protector of Shelterock.	Airedale terrier.	S. M. Stewart
1934	Ch. Flornell Spicy Bit of Halleston.	Fox terrier, wire.	Halleston Kennels
1935	Ch. Nunsoe Duc de la Terrace of Blakeen.	Poodle.	Blakeen Kennels
1936	Ch. St. Margaret Magnificent of Clairdale.	Sealyham terrier.	Clairdale Kennels
1937	Ch. Flornell Spicy Piece of Halleston.	Fox terrier, wire.	Halleston Kennels
1938	Daro of Maridor.	English setter.	Maridor Kennels
1939	Ferry v. Rauhfelden of Giralda.	Doberman pinscher.	Giralda Farms
1940-41	Ch. My Own Brucie.	Cocker spaniel.	H. E. Mellenthin
1942	Ch. Wolvey Pattern Edgerstoune.	West Highland terrier.	Mrs. John G. Winant
1943	Ch. Pitter Patter of Piperscroft.	Miniature poodle.	Mrs. P. H. B. Frelinghuysen
1944	Ch. Flornell Rare-Bit of Twin Ponds.	Welsh terrier.	Mrs. Edward P. Alker
1945	Shieling's Signature.	Scottish terrier.	Mr. and Mrs. T. H. Snethen
1946	Ch. Hetherington Model Rhythm.	Fox terrier, wire.	Mr. and Mrs. T. H. Carruthers III
1947	Ch. Warlord of Mazelaine.	Boxer.	Mr. and Mrs. R. C. Kettles, Jr.
1948	Ch. Rock Ridge Night Rocket.	Bedlington terrier.	Mr. and Mrs. W. A. Rockefeller
1949	Ch. Mazelaine's Zazarac Brandy.	Boxer.	Mr. and Mrs. John P. Wagner
1950	Ch. Walsing Winning Trick of Edgerstoune.	Scottish terrier.	Mrs. John G. Winant
1951	Ch. Bang Away of Sirrah Crest.	Boxer.	Dr. and Mrs. R. C. Harris
1952	Ch. Rancho Dobe's Storm.	Doberman pinscher.	Mr. and Mrs. Len Carey
1953	Ch. Topflight Template of Twin Ponds.	Welsh terrier.	Mrs. Edward P. Alker
1954	Ch. Carmor's Rise and Shine.	Cocker spaniel.	Mrs. Carl E. Morgan
1955	Ch. Kippax Fearnought.	Bulldog.	Dr. John A. Saylor



## Standard Measurements in Sports

### BASEBALL

- Home plate to pitcher's box—60 feet 6 inches.
- Plate to second base—127 feet  $3\frac{3}{4}$  inches.
- Distance from base to base (home plate included)—90 feet.
- Size of bases—15 inches by 15 inches.
- Pitcher's plate—24 inches by 6 inches.
- Batter's box—6 feet by 4 feet.
- Home plate—17 inches by 17 inches, cut to a point at rear.
- Home plate to backstop—Not less than 60 feet.
- Weight of ball—Not less than 5 ounces nor more than  $5\frac{1}{4}$  ounces.
- Circumference of ball—Not less than 9 inches nor more than  $9\frac{1}{4}$  inches.
- Bat—Must be round, not over  $2\frac{3}{4}$  inches in diameter at thickest part, nor more than 42 inches in length, and of hard-wood in one piece or laminated.

### FOOTBALL

- \* Length of field—120 yards.
- Width of field— $53\frac{1}{3}$  yards (160 feet).
- Height of goal posts—20 feet.
- Height of crossbar—10 feet.
- Width of goal posts—18 feet 6 inches, inside to inside, and not more than 19 feet 2 inches, outside to outside.
- Length of ball— $11\frac{1}{4}$  inches (long axis).
- Circumference of ball—21.5 inches (middle); 28.5 inches (long axis).
- \* Includes 10 yards of end zone on either side.

### LAWN TENNIS

- Size of court—Rectangle 78 feet long and 27 feet wide (singles); 78 feet long and 36 feet wide (doubles).
- Height of net—3 feet in center, gradually rising to reach 3-foot 6-inch posts at each side of court.
- Ball—Shall be more than  $2\frac{1}{2}$  inches and less than  $2\frac{5}{8}$  inches in diameter and weigh more than 2 ounces and less than  $2\frac{1}{8}$  ounces.
- Service line—21 feet from net.

### POLO

- Playing Field—300 yards long by 200 yards wide, if unboarded; 300 by 160, if boarded. In addition, there is an area of about 10 yards from the sidelines and about 30 yards from the back lines known as the safety zone.
- Goals—8 yards wide and at least 10 feet high. The posts must be light enough to break if collided with.
- Ball—Should not exceed  $3\frac{1}{4}$  inches in diameter and should weigh from  $4\frac{1}{4}$  to  $4\frac{3}{4}$  ounces. Usually made of wood, but experiments have been made with plastic balls.
- Ponies—No restrictions on height of mounts.

### GOLF

- Weight of ball—Not greater than 1.620 ounces.
- Size of ball—Not less than 1.680 inches in diameter.
- Velocity of ball—Not greater than 250 feet per second.
- Hole—Shall be  $4\frac{1}{4}$  inches in diameter and at least 4 inches deep.
- Clubs—No restrictions on the size; 14 is the maximum number permitted in championship competition.

### ICE HOCKEY

- Size of rink—200 feet long by 85 feet wide (desired size).
- Size of goal—6 feet wide by 4 feet in height.
- Puck—1 inch thick and 3 inches in diameter; made of vulcanized rubber; weight— $6\frac{1}{4}$  ounces (unofficial).
- Length of stick—Not more than 53 inches from heel to end of shaft nor  $14\frac{3}{4}$  inches from heel to end of blade. Blade should not exceed 3 inches in height, except goalkeeper's stick, which shall not exceed  $3\frac{1}{2}$  inches in height except at the heel, where it must not exceed  $4\frac{1}{2}$  inches.

### BASKETBALL

#### (National Collegiate A. A. Rules)

- Playing court—94 feet long by 50 feet wide (maximum dimensions); 74 feet long by 42 feet wide (minimum dimensions).
- Baskets—Rings 18 inches in inside diameter, with white cord nets, 15 to 18 inches in length. Each ring is made of metal and is not more than  $\frac{3}{8}$  of an inch in diameter.
- Height of basket ring—10 feet.
- Weight of ball—Not less than 20 ounces nor more than 22.
- Circumference of ball—No greater than 30 inches and not less than  $29\frac{1}{2}$ .
- Free-throw line—15 feet from the face of the backboard.

### BOXING

- Size of ring—The matches take place in an area, not less than 18 nor more than 20 feet square. It is enclosed by three 1-inch covered ropes. The floor has a 2-inch padding that extends at least 6 inches beyond the roped area in the case of elevated rings and 3 feet if the ring is at floor level.
- Gloves—In professional fights, 8-ounce gloves generally are used, except in title contests, where 6-ounce gloves are the custom. The A.A.U. requires 8-ounce gloves up to the welterweight class and 10-ounce for the heavier divisions. College rules call for a minimum of 12 ounces.

## FENCING

Source: Amateur Fencers League of America.

## NATIONAL CHAMPIONS

Year	Foil	Epee	Saber	Women's foil
1892	W. S. O'Connor	B. F. O'Connor	R. O. Haubold	
1893	W. T. Heintz	G. M. Hammond	G. M. Hammond	
1894	C. G. Bothner	R. O. Haubold	G. M. Hammond	
1895	A. V. Z. Post	C. G. Bothner	C. G. Bothner	
1896	G. Kavanaugh	A. V. Z. Post	C. G. Bothner	
1897	C. G. Bothner	C. G. Bothner	C. G. Bothner	
1899	G. Kavanaugh	M. Diaz	G. Kavanaugh	
1900	F. Townsend	W. D. Lyon	J. L. Erving	
1901	C. Tatham	C. Tatham	A. V. Z. Post	
1902	J. P. Parker	C. Tatham	A. V. Z. Post	
1903	F. Townsend	C. Tatham	A. G. Anderson	
1904	C. G. Bothner	C. G. Bothner	K. B. Johnson	
1905	C. G. Bothner	W. S. O'Connor	A. G. Anderson	
1906	S. D. Breckinridge	W. Grebe	A. G. Anderson	
1907	C. Waldbott	W. D. Lyon	G. W. Postgate	
1908	W. L. Bowman	P. Benzenberg	A. E. Sauer	
1909	O. A. Dickinson	A. De La Poer	J. T. Shaw	
1910	G. K. Bainbridge	A. De La Poer	A. G. Anderson	
1911	G. H. Breed	G. H. Breed	C. A. Bill	A. Baylis
1912	S. Hall	A. V. Z. Post	A. G. Anderson	Mrs. W. H. Dewar
1913	P. J. Meylan	A. E. Sauer	W. Von Blijenburgh	M. Stimson
1914	S. D. Breckinridge	F. W. Allen	S. Hall	J. Pyle
1915	O. A. Dickason	J. A. MacLaughlin	S. Hall	Mrs. C. H. Woorhees
1916	A. E. Sauer	W. H. Russell	A. S. Lyon	F. Walton
1917	S. Hall	L. G. Nunes		
1918	No competition			
1919	S. Hall	W. H. Russell	A. S. Lyon	No competition
1920	S. Hall	R. W. Dutcher	S. Hall	A. Gehrig
1921	F. W. Honeycutt	C. R. McPherson	C. R. McPherson	A. Gehrig
1922	H. M. Raynor	L. G. Nunes	L. G. Nunes	A. Gehrig
1923	R. Peroy	G. C. Calnan	L. M. Schoonmaker	A. Gehrig
1924	L. G. Nunes	L. G. Nunes	J. E. Gignoux	Mrs. C. H. Hopper
1925	G. C. Calnan	W. H. Russell	J. Vince	Mrs. L. M. Schoonmaker
1926	G. C. Calnan	L. G. Nunes	L. G. Nunes	Mrs. L. M. Schoonmaker
1927	G. C. Calnan	H. Van Buskirk	N. Muray	S. Stern
1928	G. C. Calnan	L. G. Nunes	N. Muray	M. Lloyd
1929	J. L. Lewis	F. S. Righeimer	L. G. Nunes	Mrs. L. M. Schoonmaker
1930	G. C. Calnan	M. Pasche	N. C. Armitage	Mrs. H. Van Buskirk
1931	G. C. Calnan	M. A. de Capriles	J. R. Huffman	M. Lloyd
1932	J. L. Lewis	L. G. Nunes	J. R. Huffman	D. Locke
1933	J. L. Lewis	G. M. Heiss	J. R. Huffman	D. Locke
1934	H. V. Alessandrini	G. M. Heiss	N. C. Armitage	H. Mayer
1935	J. L. Lewis	T. J. Sands	N. C. Armitage	H. Mayer
1936	H. V. Alessandrini	G. M. Heiss	N. C. Armitage	Mrs. J. de Tuscan
1937	J. L. Lewis	T. J. Sands	J. R. Huffman	H. Mayer
1938	D. Every	J. R. de Capriles	J. R. Huffman	H. Mayer
1939	N. Lewis	L. Tingley	N. C. Armitage	H. Mayer
1940	D. Every	F. W. Siebert	N. C. Armitage	H. Mroczkowska
1941	D. Cetrulo	G. M. Heiss	N. C. Armitage	H. Mayer
1942	W. Dow	H. Santos	N. C. Armitage	H. Mayer
1943	W. Dow	R. Driscoll	N. C. Armitage	H. Mroczkowska
1944	A. Snyder	M. A. de Capriles	T. Nyilas	M. Dalton
1945	D. Every	M. Gilman	N. C. Armitage	M. Cerra
1946	J. R. de Capriles	A. Wolff	T. Nyilas	H. Mayer
1947	Dean Cetrulo	James Strauch	James Flynn	Mrs. Helena Dow
1948	Nathaniel Lubell	Norman Lewis	Dean Cetrulo	Mrs. Helena Dow
1949	Daniel Bukantz	Norman Lewis	Umberto Martino	Polly Craus
1950	Silvio Giolito	Norman Lewis	Tibor Nyilas	Janice-Lee York
1951	Silvio Giolito	J. R. de Capriles	Tibor Nyilas	Janice-Lee York
1952	Daniel Bukantz	Abelardo Menendez	Tibor Nyilas	Mrs. Maxine Mitchell
1953	Daniel Bukantz	Donald Thompson	Tibor Nyilas	Paula Sweeney
1954	Joseph L. Lewis	Sewell Shurtz	George Worth	Mrs. Maxine Mitchell
1955	Albert Axelrod	Abram Cohen	Richard Dyer	Mrs. Maxine Mitchell

## BILLIARDS

**A**PPARENTLY nobody knows where billiards originated. Some trace the game back to ancient Greece or early Egyptian days; others insist it originated in France or England in medieval times. Shakespeare must have believed the Egyptian tale, because in *Antony and Cleopatra* he has Cleopatra saying: "Let's to billiards; come, Charmian." There is an illustration of Louis XIV of France playing billiards in 1694 and using a shovel-shaped stick to set the "cue ball" in motion, from which it is evident that the pointed cue was a later development.

Certainly the game was popular in England and on the Continent in the 17th and 18th centuries and early settlers in North America are supposed to have introduced the game here. How to apply

"english" to a billiard ball was discovered by Jack Carr, an Englishman, in 1820. A Frenchman named Mingaud is credited with having invented the "draw" shot at about the same time and also to have devised leather tips for wooden cues. Championship competition, amateur and professional, is a modern development in billiards. The first formal professional tournament held in the United States took place in New York in 1863 with eight players competing. The first three-cushion tournament was held in St. Louis in 1878. The first intercollegiate billiard match, billed as a "Grand Trial of Skill" took place on July 25, 1860, at Worcester, Mass. The freshman class of Harvard defeated the freshman class of Yale.

### Billiards Statistics

Source: John Canelli, Secretary, The Billiard Congress of America.

#### World Three-cushion Champions

1878	Leon Magnus	1912	John Horgan	1920	John Layton	1935	Welker Cochran
1899	W. H. Catton	1913-14	Alfredo DeOro	1921	Augie Kieckhefer	1936	Willie Hoppe
1900	Eugene Carter	1915	George Moore	1921-23	John Layton	1937	Welker Cochran
1900	Lloyd Jevne	1915	William H. Huey	1923	Tiff Denton	1938	Welker Cochran
1907	Harry P. Cline	1916	Alfredo DeOro	1924	R. L. Cannafax	1939	Joe Chamaco
1908	John Daly	1916	Charles Ellis	1925	R. L. Cannafax	1940-44	Willie Hoppe
1908	Thomas Hueston	1916	Charles McCourt	1926-27	Otto Reisel	1944-5-6	Welker Cochran
1908-09	Alfredo DeOro	1916	Hugh Heal	1927	Augie Kieckhefer	1947	Willie Hoppe
1910	Fred Eames	1916	George Moore	1928	Otto Reisel	1948	Willie Hoppe
1910	Alfredo DeOro	1917	Charles McCourt	1928-29	John Layton	1949	Willie Hoppe
1910	John Daly	1917	R. L. Cannafax	1930	John Layton	1950	Willie Hoppe
1910	Thomas Hueston	1917-18	Alfredo DeOro	1931	Arthur Thurnblad	1951	Willie Hoppe
1911	John Daly	1918-19	Augie Kieckhefer	1932	Augie Kieckhefer	1952	Willie Hoppe
1911	Alfredo DeOro	1919	Alfredo DeOro	1933	Welker Cochran	1953	Ray Kilgore
1912	Joe Carney	1919	R. L. Cannafax	1934	John Layton	1954-55	No tournament

#### THREE-CUSHION RECORDS

High Runs				High Averages—Best Game			
Year	Holder	Event	Points	Year	Holder	Points	Event
1915	Charles Morin	Tournament (Pro)	18	1925	Otto Reisel	50 in 16 innings	Interstate League
1919	Tiff Denton	Tournament (World)	17	1925	Otto Reisel	100 in 57 innings	Interstate League
1926	John Layton	Interstate League	18	1925	Otto Reisel	150 in 104 innings	Interstate League
1927	Willie Hoppe	American League	20	1930	John Layton	50 in 23 innings	Tournament
1928	Willie Hoppe	Exhibition vs. C. C. Peterson	25	1939	Joe Chamaco	50 in 23 innings	National League*
1930	Gus Copulos	Tournament (World)	17	1940	Jay N. Bozeman	50 in 23 innings	Tournament†
1936	Willie Hoppe	Match play	15	1945	Willie Hoppe	50 in 20 innings	Tournament‡
1939	Joe Chamaco	National League*	18	1945	Welker Cochran	60 in 20 innings	Match
1940	Tiff Denton	Tournament†	17	1947	Willie Hoppe	60 in 21 innings	Match‡
1945	Willie Hoppe	Match play‡	20				

\* No safeties. † Safeties. ‡ No safeties; optional cue ball first shot of inning.

\* No safeties. † Safeties. ‡ No safeties; optional cue ball first shot of inning.

#### National Amateur Three-cushion Champions

1910—Pierre Maupome	1925-26—Dr. A. J. Harris	1931—Frank Flemming	1946—Edward Leef
1911—Charles Morin	1927—Dr. L. P. Macklin	1931-35—Edward Lee	1946—Robert M. Lord†
1919—Arthur Newman	1928—J. N. Bozeman	1936—Edward Lee*	1947—Robert M. Lord†
1920—W. B. Huey	1929—Charles Jordan	1937—A. Primeau	1948—Robert M. Lord†
1921—Earl Lookabaugh	1929—Max Shimon	1938—Gene Deardorff	1948—C. T. Vandover‡
1922—Frank Flemming	1930—Joseph Hall	1939—Gene Deardorff	1948-54—Edward Leef
1923—Robert M. Lord	1930—Max Shimon	1945-46—	
1924—Frank Flemming	1930—R. B. Harper	C. T. Vandover‡	

\* World champion. † Events limited to athletic clubs. ‡ Match.



## World Pocket Billiard Champions

1878-80 Cyrille Dion	1901 Frank Sherman	1912 R. J. Ralph	1938-39 James Caras
1881 Gottlieb Wahlstrom	1901 Alfredo DeOro	1913 Alfredo DeOro	1940 Andrew Ponzi
1882-83 Albert Frey	1902 William Clearwater	1913-15 Bennie Allen	1941 Willie Mosconi
1884 J. L. Malone	1902 Grant Eby	1916 John Layton	1941 Erwin Rudolph
1886-87 Alfred Frey	1903 Alfredo DeOro	1916-18 Frank Taberski	1942 Irving Crane
1887 J. L. Malone (f)	1904 Alfredo DeOro	1919-24 Ralph Greenleaf	1942 Willie Mosconi
1887-88 Alfredo DeOro	1905 Jerome Keogh (f)	1925 Frank Taberski	1943 Andrew Ponzi
1888 Frank Powers	1905 Alfredo DeOro	1926 Ralph Greenleaf	1944 Willie Mosconi
1889 Albert Frey	1905 Thomas Hueston (f)	1926 Erwin Rudolph	1945 Willie Mosconi
1889 Alfredo DeOro	1906 Thomas Hueston	1926 Thomas Hueston	1946 Willie Mosconi
1890 H. Manning	1906 John Horgan	1927 Frank Taberski	1946 Irving Crane
1891 Frank Powers (f)	1906 Jerome Keogh	1927-28 Ralph Greenleaf	1947 Willie Mosconi
1892-94 Alfredo DeOro	1907 Thomas Hueston	1928 Frank Taberski	1948 Willie Mosconi
1895 William Clearwater	1908 Thomas Hueston	1929 Ralph Greenleaf	1949 Jimmy Caras
1895 Alfredo DeOro	1908 Frank Sherman	1929 Frank Taberski	1950 Willie Mosconi
1896 Frank Stewart (f)	1908 Alfredo DeOro	1930 Erwin Rudolph	1951 Willie Mosconi
1897 Grant Eby	1909 Charles Weston	1930-32 Ralph Greenleaf	1952 Willie Mosconi
1897 Jerome Keogh	1909 John Kling	1933-34 Erwin Rudolph	1953 Willie Mosconi
1898 William Clearwater	1910 Thomas Hueston	1935 Andrew Ponzi	1954 No tournament
1898 Jerome Keogh	1910 Jerome Keogh	1936 James Caras	1955 Irving Crane
1899-1900 Alfredo DeOro	1910-12 Alfredo DeOro	1937 Ralph Greenleaf	1955 Willie Mosconi

(f) Fortelt.

## RECORDS—14.1 POCKET BILLIARDS

## HIGH RUNS

Tournament—Ralph Greenleaf, 1929, Detroit.....	126
Tournament—Bennie Allen, 1935, New York.....	125
Tournament—George Kelly, 1935, Minneapolis.....	125
Tournament—Joe Procita, 1954, Philadelphia.....	182
League—Andrew Ponzi, 1939.....	127
Match—Andrew Ponzi, 1934, New York.....	153
Match—Willie Mosconi, 1945.....	127
Match—James Caras, 1946.....	127
Exhibition—Willie Mosconi, 1954.....	526

## HIGH AVERAGES

## (Tournament)

Single—Ralph Greenleaf, 1929, Detroit.....	65
Grand (4½ x 9)—Willie Mosconi, 1950, Chicago.....	18.34
Grand (5 x 10)—Ralph Greenleaf, 1929, Detroit.....	11.02

## BEST GAMES

Ralph Greenleaf (world's championship), 2 innings, vs. Frank Taberski, 1929, Detroit	
Willie Mosconi (5 x 10), 2 innings, vs. Arthur Cranfield, 1941	
Willie Mosconi, 2 innings, vs. George Chenier, 1952, Boston	
Willie Mosconi (world's championship), 2 innings, vs. Luther Lassiter, 1953, San Francisco	

Within 25 months after Roger Bannister ran the first mile under four minutes in 1954, so many others followed his example that his epic performance of 3:59.4 no longer ranked among the ten fastest miles.

Bannister himself improved on his mark in 1954. In May 1955, three men bettered four minutes in one race, although only one ran faster than Bannister's initial effort.

The record of the world's fastest miles

Time	Runner and country	Site	Date
3:58.0	John Landy, Australia	Turku, Finland	June 21, 1954
3:58.6	John Landy, Australia	Melbourne, Australia	Jan. 28, 1956
3:58.6	John Landy, Australia	Melbourne, Australia	April 7, 1956
3:58.6	Jim Bailey, Australia	Los Angeles, Calif.	May 5, 1956
3:58.7	*John Landy, Australia	Los Angeles, Calif.	May 5, 1956
3:58.8	Roger Bannister, England	Vancouver, B. C.	Aug. 7, 1954
3:59.0	Laszlo Tabori, Hungary	London, England	May 28, 1954
3:59.0	Ron Delany, Ireland	Compton, Calif.	June 1, 1955
3:59.0	Istvan Rozsavolgyi, Hungary	Budapest, Hungary	Aug. 26, 1955
3:59.1	John Landy, Australia	Fresno, Calif.	May 12, 1955
3:59.1	*Gunnar Nielsen, Denmark	Compton, Calif.	June 1, 1955
3:59.4	Roger Bannister, England	Oxford, England	May 6, 1955
3:59.4	Derek Ibbotson, England	London, England	Aug. 6, 1955
3:59.6	*John Landy, Australia	Vancouver, B. C.	Aug. 7, 1955
3:59.8	*Chris Chataway, England	London, England	May 28, 1955
3:59.8	†Brian Hewson, England	London, England	May 28, 1955

\* Finished second. † Finished third. The world indoor record is 4:03.6, set by Gunnar Nielsen of Denmark at Madison Square Garden, New York, Feb. 5, 1955.

## TRACK AND FIELD

**R**UNNING, jumping, hurdling and throwing weights—track and field sports, in other words—are as natural to boys and young men as eating, drinking and breathing. Unorganized competition in this form of sport goes back beyond the Cave Man era. Organized competition begins with the first recorded Olympic Games in Greece, 776 B. C., when Coroebus of Elis won the only event on the program, a race of approximately 200 yards. The Olympic Games, with an ever-widening program of events, continued until "the glory that was Greece" had faded and "the grandeur that was Rome" was tarnished, and finally were abolished by decree of Emperor Theodosius I of Rome in A. D. 394. The Talteann Games of Ireland are supposed to have antedated the first Olympic Games by some centuries, but we have no records of the specific events and winners thereof.

Professional contests of speed and strength were popular at all times and in many lands, but the widespread competition of amateur athletes in track and field

sports is a comparatively modern development. The first organized amateur athletic meet of record was sponsored by the Royal Military Academy at Woolwich, England, in 1849. Oxford and Cambridge track and field rivalry began in 1864 and the English amateur championships were established in 1866. In the United States such organizations as the New York Athletic Club and the Olympic Club of San Francisco conducted track and field meets in the 1870's, and a few colleges joined to sponsor a meet in 1874. The success of the college meet led to the formation of the Inter-collegiate Association of Amateur Athletes of America and the holding of an annual set of championship games beginning in 1876.

Many athletic clubs joined the National Association of Amateur Athletes of America, formed in 1879, but dissension broke up this organization and the Amateur Athletic Union, organized in 1888, has been the ruling body in American amateur athletics since that time.

## Track and Field Statistics

Source: *Official A. A. U. Track and Field Rules and Records Book*. Reprinted by courtesy of the publishers, the Amateur Athletic Union of the United States, 233 Broadway, New York, N. Y.

### MEN'S WORLD RECORDS

Recognized by the International Amateur Athletic Federation as of Jan. 5, 1956.

#### RUNNING

Event	Record	Holder	Home country	Where made	Date
100 yd.....	9.3 s.	Melvin E. Patton.....	United States.....	Fresno, Calif.....	May 15, 1948
		Hector Hogan.....	Australia.....	Sydney.....	Mar. 13, 1954
		James Golliday.....	U. S.....	Evanston, Ill.....	May 14, 1955
220 yd.....	20.2 s.	Melvin E. Patton.....	United States.....	Los Angeles.....	May 7, 1949
440 yd.....	46 s.	Herbert McKenley.....	Jamaica, B.W.I.....	Berkeley, Calif.....	June 5, 1949
880 yd.....	1 m. 47.5 s.	Lon Spurrier.....	U. S.....	Berkeley, Calif.....	Mar. 26, 1955
1 mi.....	3 m. 58 s.	John Landy.....	Australia.....	Turku, Finland.....	June 21, 1954
2 mi.....	8 m. 33.4 s.	Sandor Iharos.....	Hungary.....	London.....	May 30, 1955
3 mi.....	13 m. 14.2 s.	Sandor Iharos.....	Hungary.....	Budapest.....	Nov. 23, 1955
6 mi.....	27 m. 59.2 s.	Emil Zatopek.....	Czechoslovakia.....	Brussels.....	June 1, 1954
10 mi.....	48 m. 12 s.	Emil Zatopek.....	Czechoslovakia.....	Boleslav, Czech.....	Sept. 29, 1951
15 mi.....	1 h. 16 m. 26.4 s.	Emil Zatopek.....	Czechoslovakia.....	Boleslav, Czech.....	Oct. 26, 1952
1 hr.....	12 mi. 810 yd.	Emil Zatopek.....	Czechoslovakia.....	Boleslav, Czech.....	Sept. 29, 1951

#### WALKING

Event	Record	Holder	Home country	Where made	Date
2 mi.....	12 m. 45 s.	Werner Hardmo.....	Sweden.....	Malmö.....	Sept. 1, 1945
5 mi.....	34 m. 32.8 s.	J. Dolezal.....	Czechoslovakia.....	Manchester, Eng.....	Oct. 15, 1955
7 mi.....	48 m. 15.2 s.	Werner Hardmo.....	Sweden.....	Kumla, Sweden.....	Sept. 9, 1945
10 mi.....	1 h. 10 m. 45.8 s.	J. Dolezal.....	Czechoslovakia.....	Boleslav, Czech.....	April 30, 1954
20 mi.....	2 h. 33 m. 9.4 s.	J. Dolezal.....	Czechoslovakia.....	Boleslav, Czech.....	May 14, 1954
30 mi.....	4 h. 20 m. 10.6 s.	A. Roka.....	Hungary.....	Budapest.....	Oct. 30, 1955
1 hr.....	8 mi. 1052 yd.	John Mikaelsson.....	Sweden.....	Stockholm.....	Sept. 1, 1945
2 hr.....	16 mi. 126 yd.	Anatoli Vedjakov.....	U.S.S.R.....	Moscow.....	Oct. 7, 1955

## RUNNING—METRIC DISTANCES

Event	Record	Holder	Home country	Where made	Date
100 meters	10.2 s.	Jesse Owens	United States	Chicago	June 20, 1936
		Harold Davis	United States	Compton, Calif.	June 6, 1941
		Lloyd LaBeach	Panama	Fresno, Calif.	May 15, 1948
		N. H. Ewell	United States	Evanston, Ill.	July 9, 1948
		E. McD. Bailey	Gt. Brit. & N. Ire.	Belgrade	Aug. 25, 1951
		Heinz Fütterer	Germany	Yokohama, Japan	Oct. 31, 1954
200 m.	20.2 s.	Melvin E. Patton	United States	Los Angeles	May 7, 1949
400 m.	45.4 s.	Louis Jones	U. S.	Mexico City	Mar. 18, 1955
800 m.	1 m. 45.7 s.	Roger Moens	Belgium	Oslo	Aug. 3, 1955
1,000 m.	2 m. 19 s.	Audun Boysen	Norway	Göteborg, Sweden	Aug. 30, 1955
		Istvan Rozsavolgyi	Hungary	Tata, Hungary	Sept. 21, 1955
1,500 m.	3 m. 40.8 s.	Sandor Iharos	Hungary	Helsinki	July 28, 1955
		Laszlo Tabori	Hungary	Oslo	Sept. 6, 1955
		Gunnar Nielsen	Denmark	Oslo	Sept. 6, 1955
2,000 m.	5 m. 2.2 s.	Istvan Rozsavolgyi	Hungary	Budapest	Oct. 2, 1955
3,000 m.	7 m. 55.6 s.	Sandor Iharos	Hungary	Budapest	May 14, 1955
5,000 m.	13 m. 40.6 s.	Sandor Iharos	Hungary	Budapest	Sept. 23, 1955
10,000 m.	28 m. 54.2 s.	Emil Zatopek	Czechoslovakia	Brussels	June 1, 1954
15,000 m.	44 m. 54.6 s.	Emil Zatopek	Czechoslovakia	Boleslav	Sept. 29, 1951
20,000 m.	59 m. 51.6 s.	Emil Zatopek	Czechoslovakia	Boleslav	Sept. 29, 1951
25,000 m.	1 h. 17 m. 34 s.	A. Ivanov	U.S.S.R.	Moscow	Sept. 27, 1955
30,000 m.	1 h. 35 m. 23.8 s.	Emil Zatopek	Czechoslovakia	Boleslav	Oct. 26, 1952
1 hr.	20,052 meters 40 cm.	Emil Zatopek	Czechoslovakia	Boleslav	Sept. 29, 1951
3,000 m. steeplechase	8 m. 40.2 s.	Jerszy Chromik	Poland	Budapest	Sept. 11, 1955

## WALKING—METRIC DISTANCES

Event	Record	Holder	Home country	Where made	Date
3,000 m.	11 m. 51.8 s.	Werner Hardmo	Sweden	Malmö	Sept. 1, 1945
5,000 m.	20 m. 26.8 s.	Werner Hardmo	Sweden	Kumla	July 31, 1945
10,000 m.	42 m. 39.6 s.	Werner Hardmo	Sweden	Kumla	Sept. 9, 1945
15,000 m.	1 h. 5 m. 59.6 s.	J. Dolezal	Czechoslovakia	Boleslav	April 30, 1954
20,000 m.	1 h. 30 m. 2.8 s.	V. Golubnichij	U.S.S.R.	Kiev	Oct. 2, 1955
30,000 m.	2 h. 20 m. 40.2 s.	Anatoli Vedjakov	U.S.S.R.	Moscow	Oct. 7, 1955
50,000 m.	4 h. 29 m. 58 s.	J. Ljunggren	Sweden	Fristad, Sweden	Aug. 8, 1953
1 hr.	13,812 m.	John Mikaelsson	Sweden	Stockholm	Sept. 1, 1945
2 hr.	25,865 m.	Anatoli Vedjakov	U.S.S.R.	Moscow	Oct. 7, 1955

## HURDLES (10 hurdles)

Event	Record	Holder	Home country	Where made	Date
120 yd.	13.5 s.	R. A. Attlessey	United States	Fresno, Calif.	May 13, 1950
220 yd.	22.3 s.	Harrison Dillard	United States	Salt Lake City, Utah	June 21, 1947
440 yd.	51.3 s.	Yuriy Lituyev	U.S.S.R.	London	Oct. 13, 1954
110 m.	13.5 s.	R. A. Attlessey	United States	Helsinki	July 10, 1950
200 m.	22.3 s.	Fred Wolcott	United States	Princeton, N. J.	June 8, 1940
		Harrison Dillard	United States	Salt Lake City, Utah	June 21, 1947
400 m.	50.4 s.	Yuriy Lituyev	U.S.S.R.	Budapest	Sept. 20, 1953

## RELAY RACES

Event	Record	Holder	Home country	Where made	Date
440 yd. (4 x 110)	40.2 s.	University of Texas	U. S.	Modesto, Calif.	May 21, 1955
880 yd. (4 x 220)	1 m. 24 s.	(F. D. Smith, A. Frieden, J. Prewit, R. Whilden)	United States	Los Angeles	May 20, 1949
		Univ. of So. California	United States	Los Angeles	May 20, 1949
1 mi. (4 x 440)	3 m. 8.8 s.	(M. Patton, R. Frazier, G. Pasquali, N. Stocks)	National Team	London	Aug. 9, 1952
2 mi. (4 x 880)	7 m. 27.3 s.	(E. Cole, J. W. Mashburn, R. Pearman, M. Whitfield)	United States	Los Angeles	May 21, 1954
		Fordham University	United States	Los Angeles	May 21, 1954
4 mi. (4 x 1 mile)	16 m. 41 s.	(T. Foley, F. Tarsney, W. Persichetty, T. Courtney)	National Team	London	Aug. 1, 1953
		(C. Chataway, G. Nankeville, D. Seaman, R. Bannister)	Gt. Brit. & No. Ire.	London	Aug. 1, 1953

## RELAY RACES—METRIC DISTANCES

Event	Record	Holder	Home country	Where made	Date
400 m. (4 x 100)	39.8 s.	U. S. A. National Team	United States	Berlin	Aug. 9, 1936
800 m. (4 x 200)	1 m. 24 s.	(Owens, Metcalfe, Draper, Wykoff)	United States	Los Angeles	May 20, 1949
		Univ. of So. California	United States	Los Angeles	May 20, 1949
1,600 m. (4 x 400)	3 m. 3.9 s.	(M. Patton, R. Frazier, G. Pasquali, N. Stocks)	National Team	Helsinki	July 27, 1952
3,200 m. (4 x 800)	7 m. 28 s.	(A. Wint, L. Laing, H. McKenley, G. Rhoden)	Uda	Boleslav	July 29, 1953
		(D. Cikel, A. Strzinck, L. Leika, S. Jungwirth)	Czechoslovakia	Boleslav	July 29, 1953
6,000 m. (4 x 1,500)	15 m. 14.8 s.	Budapest H. S. E.	Hungary	Budapest	Sept. 29, 1955
		(F. Mikes, L. Tabori, I. Rozsavolgyi, S. Iharos)	Hungary	Budapest	Sept. 29, 1955



## FIELD EVENTS

Event	Record	Holder	Home country	Where made	Date
High jump	6 ft. 11½ in. (2.12 m.)	Walter Davis	United States	Dayton, Ohio	June 27, 1953
Running broad jump	26 ft. 8¼ in. (8.13 m.)	Jesse Owens	United States	Ann Arbor	May 25, 1935
Long, hop, step, jump	53 ft. 2¼ in. (16 m. 23 cm.)	L. Scherbakov	U.S.S.R.	Moscow	July 19, 1953
Pole vault	15 ft. 7¾ in. (4.77 m.)	C. Warmerdam	United States	Modesto, Calif.	May 23, 1942
5-lb. shot-put	60 ft. 10 in. (18.54 m.)	Parry O'Brien	United States	Los Angeles	June 11, 1954
Discus throw	194 ft. 6 in. (59.28 m.)	Fortune Gordien	United States	Pasadena, Calif.	Aug. 22, 1953
Javelin throw	268 ft. 2½ in. (81.75 m.)	Franklin Held	United States	Modesto, Calif.	May 21, 1955
Hammer throw	211 ft. ½ in. (64.33 m.)	Mikhail Krivonosov	U.S.S.R.	Warsaw	Aug. 4, 1955

## DECATHLON

Points	Holder	Home country	Where made	Date
985 pts.	Rafer Johnson	United States	Kingsburg, Calif.	June 10-11, 1955

## WOMEN'S WORLD RECORDS

## RUNNING

Event	Record	Holder	Home country	Where made	Date
100 yd.	10.4 s.	Marjorie Jackson	Australia	Sydney	Mar. 8, 1952
20 yds.	24 s.	M. Nelson Jackson	Australia	Vancouver	Aug. 5, 1954
80 yd.	2 m. 8.4 s.	N. Otkalenko	U.S.S.R.	Moscow	July 18, 1954
100 m.	7.3 s.	Stella Walasiewicz	Poland	Lemberg, Pol.	Sept. 24, 1933
200 m.	11.3 s.	Shirley de la Hunty	Australia	Warsaw	Aug. 4, 1955
400 m.	23.4 s.	Marjorie Jackson	Australia	Helsinki	July 25, 1952
800 m.	2 m. 6.6 s.	N. Otkalenko	U.S.S.R.	Kiev	Sept. 16, 1954

## RELAY RACES

40 yd. (4 x 110)	46.3 s.	National Team	Australia	London	Aug. 4, 1952
		(S. S. de la Hunty, V. Johnson, W. Cripps, M. Jackson)			
100 m. (4 x 100)	45.6 s.	National Team	U.S.S.R.	Budapest	Sept. 20, 1953
		(V. Kalashnikova, Z. Sofronova, N. Dvalijvili-Hnikina, I. Turova)			
30 yd. (4 x 220)	1 m. 39.9 s.	Great Britain and Northern Ireland	London		Sept. 30, 1953
		(A. Pashley, J. Newbould, S. Hampton, A. Johnson)			
100 m. (4 x 200)	1 m. 36.4 s.	National Team	U.S.S.R.	Bucharest	Sept. 9, 1953
		(F. Calajnicova, V. Kazenteva, Z. Sofronova, N. Dvalijvili-Hnikina)			
400 m. (3 x 800)	6 m. 27.6 s.	National Team	U.S.S.R.	Moscow	Sept. 11, 1955
		(N. Otkalenko, L. Lisenko, L. A. Lapshina)			
½ mi. (3 x 880)	6 m. 36.2 s.	Hungarian National Team	Tata		July 21, 1954
		(A. Bacskai, A. Oros, A. Kazi)			

## HURDLES

100 m.	10.8 s.	Galina Ermolenko	U.S.S.R.	Leningrad	July 5, 1955
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## FIELD EVENTS

High jump	5 ft. 8 in. (1 m. 73 cm.)	A. Chudina	U.S.S.R.	Kiev	May 22, 1954
Broad jump	20 ft. 7½ in. (6.28 m.)	Yvette Williams	New Zealand	Sydney	Feb. 20, 1954
		Galina Vinogradova	U.S.S.R.	Moscow	Sept. 11, 1955
Shot put	53 ft. 5¼ in. (16.29 m.)	Galina Zybina	U.S.S.R.	Leningrad	Sept. 5, 1955
Discus throw	187 ft. 1½ in. (57 m. 4 cm.)	Nina Dumbadze	U.S.S.R.	Tbilisi, U.S.S.R.	Oct. 18, 1952
Javelin throw	182 ft. (55.48 m.)	N. Konjaeva	U.S.S.R.	Kiev	Aug. 6, 1954

## PENTATHLON

50 pts.	Alexandra Chudina	U.S.S.R.	Moscow	Sept. 6-7, 1955
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## Marciano Retires Undefeated

Rocky Marciano, heavyweight boxing champion of the world and winner of each of his 49 fights as a professional, announced his retirement from the ring on April 27, 1956. He is the only heavyweight champion ever to retire without losing a professional fight or even boxing to a draw.

Marciano won the title on Sept. 23, 1952, in Philadelphia, by knocking out Joe Walcott in the 13th round. He defended his crown six times. His gross purses for his 49 bouts have been estimated at \$2,000,000.

Marciano was born in Brockton, Mass., on Sept. 1, 1924.

Of his 49 victories, the retired champion scored 43 by knockouts, more than half of them within three rounds.

These were Marciano's championship fights:

*Sept. 23, 1952—Joe Walcott, Philadelphia	KO 13
May 15, 1953—Joe Walcott, Chicago	KO 1
Sept. 24, 1954—Roland LaStarza, New York	KO 11
June 17, 1954—Ezzard Charles, New York	W 15
Sept. 17, 1954—Ezzard Charles, New York	KO 8
May 16, 1955—Don Cockell, San Francisco	KO 9
Sept. 21, 1955—Archie Moore, New York	KO 9

\* Won title.

## History of the Record for the Mile Run

Year	Athlete and country	Where made	Time
1865	Webster, England	England	4:44.1
1866	C. B. Lawes, England	England	4:39.1
1868	W. M. Chinnery, England	England	4:38.1
1871	W. M. Chinnery, England	England	4:31.1
1874	Walter Slade, England	England	4:24.1
1881	Walter George, England	England	4:19.1
1884	Walter George, England	England	4:18.1
1895	F. E. Bacon, England	England	4:17.1
1895	T. P. Conneff, United States	United States	4:15.1
1911	John Paul Jones, United States	United States	4:15.1
1913	John Paul Jones, United States	United States	4:14.1
1915	Norman Taber, United States	United States	4:12.1
1923	Pavvo Nurmi, Finland	Sweden	4:10.1
1931	Jules Ladoumègue, France	France	4:09.1
1933	John Lovelock, New Zealand	United States	4:07.1
1934	Glenn Cunningham, United States	United States	4:06.1
1937	Sydney Wooderson, England	England	4:06.1
1942	Gunder Hagg, Sweden	Sweden	4:06.1
1942	Gunder Hagg, Sweden	Sweden	4:04.1
1943	Arne Andersson, Sweden	Sweden	4:03.1
1944	Arne Andersson, Sweden	Sweden	4:01.1
1945	Gunder Hagg, Sweden	Sweden	4:01.1
1954	Roger Bannister, England	England	3:59.1
1954	John Landy, Australia	Finland	3:58.1

## TABLE TENNIS

## United States Champions

## MEN'S SINGLES

1931	Marcus Schussheim, New York
1932	Coleman Clark, Chicago*
	Marcus Schussheim, New York*
1933	James M. Jacobson, New Rochelle, N. Y.*
	Sidney Heitner, New York*
1934	James McClure, Indianapolis*
	Sol Schiff, New York*
1935	A. Berenbaum, New York
1936	Viktor Barna, Hungary†
	Sol Schiff, New York†
1937	Laszlo Bellak, Hungary†
1938	Laszlo Bellak, Hungary
1939	James McClure, Indianapolis
1940	Louis Pagliaro, New York
1941	Louis Pagliaro, New York
1942	Louis Pagliaro, New York
1943	William Holzrichter, Chicago
1944	John Somael, New York
1945	Richard Miles, New York
1946	Richard Miles, New York
1947	Richard Miles, New York
1948	Richard Miles, New York
1949	Richard Miles, New York
1950	John Leach, England
1951	Richard Miles, New York
1952	Louis Pagliaro, New York
1953-55	Richard Miles, New York

## MEN'S DOUBLES

1932	James M. Jacobson-George T. Bacon, Jr., New Rochelle, N. Y.
1933	Paul Pearson-Edwin Lewis, Chicago*
	Ralph Langsam-Lloyd Waterson, New York*
1934	Samuel Silberman-Alan Lobell, New York*
	Sol Schiff, N. Y.-Manny Moskowitz, Rutherford, N. J.
1935	A. Berenbaum, N. Y.-Edward Silverglade, Trenton, N. J.
1936	James McClure, Indianapolis-Robert Blattner, Louisville
	James M. Jacobson, New Rochelle, N. Y.-Sol Schiff, New York†
1937	Laszlo Bellak, Hungary-Standa Kolar, Czechoslovakia
1938	Sol Schiff, New York-James McClure, Indianapolis
1939	Laszlo Bellak-Tibor Hazi, Hungary
1940	Sol Schiff, New York-James McClure, Indianapolis
1941-42	Edward Pinner-Cy Sussman, New York
1943	Laszlo Bellak, New York-Tibor Hazi, Philadelphia
1944	William Holzrichter, Chicago-Laszlo Bellak, N. Y.
1945	John Somael, New York-Max Hersh, Detroit
1946	Edward Pinner-Cy Sussman, New York
1947	Douglas Cartland-Arnold Fetbrod, New York
1948	Tibor Hazi, Washington-John Somael, New York
1949	Martin Reisman-Sol Schiff, New York
1950	John Leach-Jack Carrington, England
1951	M. Reisman, N. Y.-W. Holzrichter, Chicago
1952	Richard Miles-Sol Schiff, New York
1953	Richard Miles-John Somael, New York
1954	Bernard Bukiet, Chicago-Tibor Hazi, Washington
1955	R. Bergmann, England-E. Klein, Los Angeles

## WOMEN'S SINGLES

1933	Jessie Purves and Mrs. Fan Pockrose*
1934	Ruth Hughes Aarons and Iris Little*
1935	Ruth Hughes Aarons
1936	Ruth Hughes Aarons†
1937	Ruth Hughes Aarons†
1938-39	Emily Fuller
1940	Sally Green
1941	Sally Green
1942	Sally Green
1943	Sally Green
1944	Sally Green

1945	Davida Hawthorn
1946	Bernice Charney
1947	Leah Thall
1948	Peggy McLean
1949	Mrs. Leah Thall Neuberger
1950	Mrs. Reba K. Monness
1951	Mrs. Leah Thall Neuberger
1952	Mrs. Leah Thall Neuberger
1953	Mrs. Leah Thall Neuberger
1954	Mildred Shaban
1955	Mrs. Leah Thall Neuberger

\* Co-champions. At the time there were two national associations, each with its own champion. † Open championships.

## SWIMMING

THERE IS THE ancient tale of Leander of Abydos swimming the Hellespont nightly to call on Helen of Sestos but nobody kept the time on his trips. However, Lord Byron swam one leg of the old Leander course, Sestos to Abydos, on May 3, 1810, in 1 hour 10 minutes. The famous British poet was a noted swimmer and once, in an endurance trial at Venice, was in the water for 4 hours 10 minutes. Distance swimming was the early type of competition. Captain Matthew Webb achieved fame by being the first to swim the English Channel—Dover to Calais—in August, 1875, in 21 hours 45 minutes. Many other swimmers, men and women, have conquered the

Channel since that time. Gertrude Ederle, of New York City, was the first woman to accomplish the feat. Miss Ederle swam the Channel Aug. 6, 1926, in 14 hours 34 minutes, breaking the existing record at that time. Since then the record has been lowered by a number of men and women.

Regular competition at short as well as long distances and indoor as well as outdoor came with the development of such organizations as the Amateur Athletic Union and the building of indoor and outdoor swimming pools. Swimming has been on the Olympic program since the start of the modern Olympic Games at Athens in 1896.

## WORLD RECORDS

Source: *Official Amateur Athletic Union Swimming Rules and Records Book*. Reprinted by courtesy of the publishers, the Amateur Athletic Union of the United States, 233 Broadway, New York, N. Y., and R. M. Ritter, Vice-President, International Amateur Swimming Federation.

Accepted by the International Amateur Swimming Federation as of June 1, 1956.

### MEN

#### FREE STYLE

Distance	Time	Course	Holder	Home country	Where made	Date
100 yd.	48.9 s.	25 yd.	Robin Moore	U. S.	Stanford	May 19, 1956
100 m.	54.8 s.	25 m.	Richard Cleveland	U. S.	New Haven	Apr. 1, 1954
0 m.	2 m. 3.4 s.	25 yd.	J. C. Wardrop	Gt. Britain	Columbus	Mar. 4, 1955
0 m.	2 m. 3.4 s.	25 yd.	J. C. Wardrop	Gt. Britain	Columbus	Mar. 4, 1955
0 m.	4 m. 26.7 s.	25 yd.	Ford H. Konno	U. S.	New Haven	Apr. 3, 1954
0 yd.	4 m. 28.1 s.	25 yd.	J. B. Marshall	Australia	New Haven	Mar. 24, 1951
0 yd.	5 m. 12 s.	25 yd.	J. B. Marshall	Australia	New Haven	June 30, 1950
0 m.	5 m. 43.7 s.	25 yd.	J. B. Marshall	Australia	New Haven	Feb. 17, 1951
0 m.	9 m. 30.7 s.	100 m.	Ford H. Konno	U. S.	Honolulu	July 7, 1951
0 yd.	9 m. 34.3 s.	55 yd.	Murray Rose	Australia	Sydney	Jan. 18, 1956
100 m.	18 m. 5.9 s.	50 m.	George Breen	U. S.	New Haven	Mar. 29, 1956
100 m.	19 m. 40.4 s.	50 m.	George Breen	U. S.	New Haven	Apr. 5, 1956

#### Relays

100 yd.	3 m. 21.3 s.	25 yd.	Yale University	U. S.	New Haven	Feb. 12, 1955
(K. Donovan, H. Gideonse, D. Armstrong, J. Niles)						
100 m.	3 m. 46.8 s.	50 m.	National Team	Japan	Tokyo	Aug. 6, 1955
(H. Suzuki, A. Tani, T. Goto, M. Koga)						
100 yd.	7 m. 39.9 s.	25 yd.	Yale University	U. S.	New Haven	Feb. 14, 1953
(W. Moore, J. McLane, M. Smith, D. Sheff)						
100 m.	8 m. 29.4 s.	25 m.	Yale University	U. S.	New Haven	Feb. 16, 1952
(W. Moore, J. McLane, D. Sheff, R. Thoman)						

#### BREAST STROKE (Orthodox Style)

100 yd.	1 m. 1.4 s.	25 m.	M. Furukawa	Japan	Tokyo	Oct. 1, 1955
100 m.	1 m. 8.2 s.	25 m.	M. Furukawa	Japan	Tokyo	Oct. 1, 1955
100 m.	2 m. 31 s.	25 m.	M. Furukawa	Japan	Tokyo	Oct. 1, 1955
100 yd.	2 m. 21.9 s.	25 m.	M. Furukawa	Japan	Tokyo	Oct. 1, 1955

#### BACKSTROKE

100 yd.	55.7 s.	25 yd.	Yoshinobu Oyakawa	U. S.	Columbus	Feb. 27, 1954
100 m.	1 m. 2.1 s.	25 m.	G. Bozon	France	Troyes	Feb. 27, 1955
100 m.	2 m. 18.3 s.	25 m.	G. Bozon	France	Algiers	June 26, 1953

#### BUTTERFLY

100 yd.	54.4 s.	25 yd.	Albert Wiggins	U. S.	Columbus	Jan. 21, 1956
100 m.	1 m. 1.5 s.	25 m.	Albert Wiggins	U. S.	New Haven	Apr. 2, 1955
100 m.	2 m. 16.7 s.	25 yd.	Wm. Yorzyk	U. S.	Winchendon	Apr. 14, 1956
100 yd.	2 m. 18.7 s.	25 yd.	Wm. Yorzyk	U. S.	Winchendon	Apr. 14, 1956

#### INDIVIDUAL MEDLEY

100 yd.	4 m. 36.9 s.	25 yd.	J. C. Wardrop	Gt. Britain	New Haven	Apr. 1, 1955
100 m.	5 m. 15.4 s.	25 m.	V. Stroujanov	U.S.S.R.	Minsk	Oct. 2, 1954



## MEDLEY RELAYS

(Back, breast, free style, butterfly)

400 yd.....	3 m. 46 s.....	25 yd.....	No. Carolina A. C.....	U. S.....	New Haven.....	Apr. 7, 1956
			(W. Sonner, R. Fadgens, J. Nelson, D. McIntyre)			
400 m.....	4 m. 15.7 s.....	50 m.....	National Team.....	Japan.....	Osaka.....	Aug. 13, 1956
			(K. Hase, M. Furukawa, T. Ishimoto, M. Kogo)			

## WOMEN

## FREE STYLE

Distance	Time	Course	Holder	Home country	Where made	Date
100 yd.....	58.1 s.....	25 yd.....	Jody Alderson.....	U. S.....	Chicago.....	July 30, 1955
100 m.....	1 m. 4 s.....	25 m.....	C. Gastelaars.....	Holland.....	Schiedam.....	Apr. 14, 1955
100 m.....	2 m. 20.7 s.....	55 yd.....	Dawn Fraser.....	Australia.....	Sydney.....	Feb. 25, 1955
220 yd.....	2 m. 21.2 s.....	55 yd.....	Dawn Fraser.....	Australia.....	Sydney.....	Feb. 25, 1955
400 m.....	5 m. 0.1 s.....	25 m.....	R. Hveger.....	Denmark.....	Copenhagen.....	Sept. 15, 1944
440 yd.....	5 m. 5.9 s.....	55 yd.....	Lorraine Crapp.....	Australia.....	Sydney.....	Feb. 18, 1955
800 m.....	10 m. 30.9 s.....	55 yd.....	Lorraine Crapp.....	Australia.....	Sydney.....	Jan. 14, 1955
880 yd.....	10 m. 34.6 s.....	55 yd.....	Lorraine Crapp.....	Australia.....	Sydney.....	Jan. 14, 1955
1,500 m.....	20 m. 46.5 s.....	50 m.....	L. de Nijs.....	Holland.....	Utrecht.....	July 23, 1954
1 mi.....	22 m. 5.5 s.....	50 m.....	L. de Nijs.....	Holland.....	Utrecht.....	Aug. 12, 1954

## Relays

400 yd.....	3 m. 56.8 s.....	25 yd.....	Lafayette S. C.....	U. S.....	Daytona Beach.....	Apr. 6, 1956
			(J. Rosazza, L. Crocker, B. Love, H. Hughes)			
400 m.....	4 m. 24.4 s.....	50 m.....	National Team.....	Hungary.....	Helsinki.....	Aug. 1, 1956
			(I. Novak, J. Temes, E. Novak, E. Szekely)			

## BACKSTROKE

100 yd.....	1 m. 4.6 s.....	25 m.....	G. Wielema.....	Netherlands.....	Hilversum.....	Mar. 13, 1956
100 m.....	1 m. 10.9 s.....	25 m.....	Cor Kint.....	Netherlands.....	Rotterdam.....	Sept. 22, 1956
200 m.....	2 m. 35.3 s.....	25 m.....	G. Wielema.....	Netherlands.....	Hilversum.....	Apr. 2, 1956

## BUTTERFLY

100 yd.....	1 m. 4.1 s.....	25 yd.....	Shelley Mann.....	U. S.....	Daytona Beach.....	Apr. 7, 1956
100 m.....	1 m. 11.9 s.....	25 m.....	A. Voorbij.....	Holland.....	Velsen.....	Feb. 5, 1956

## INDIVIDUAL MEDLEY

400 yd.....	5 m. 10.5 s.....	33½ yd.....	Mary Kok.....	Holland.....	London.....	Dec. 12, 1956
400 m.....	5 m. 40.8 s.....	25 m.....	E. Szekely.....	Hungary.....	Budapest.....	July 13, 1956

## MEDLEY RELAYS

(Back, breast, free style, butterfly)

400 yd.....	4 m. 23 s.....	25 yd.....	Walter Reed S. C.....	U. S.....	Detroit.....	Mar. 8, 1956
			(S. Mann, M. J. Sears, B. M. Brey, W. Werner)			
400 m.....	4 m. 57.8 s.....	50 m.....	National Team.....	Hungary.....	Budapest.....	Sept. 3, 1956
			(E. Pajor, E. Szekely, R. Szekely, K. Szoke)			

## ATHLETES OF THE YEAR

(Associated Press polls)

## MALE

## FEMALE

1931—Pepper Martin (baseball); Helene Madison (swimming)	1932—Gene Sarazen (golf); Mildred Didrikson (track)	1933—Carl Hubbell (baseball); Helen Jacobs (tennis)	1934—Dizzy Dean (baseball); Virginia Van Wie (golf)	1935—Joe Louis (boxing); Helen Wills Moody (tennis)	1936—Jesse Owens (track); Helen Stephens (track)	1937—Don Budge (tennis); Katherine Rawls (swimming)	1938—Don Budge (tennis); Patty Berg (golf)	1939—Nile Kinnick (football); Alice Marble (tennis)	1940—Tommy Harmon (football); Alice Marble (tennis)	1941—Joe DiMaggio (baseball); Betty Hicks Newell (golf)	1942—Frank Sinkwich (football); Gloria Callen (swimming)	1943—Gunder Hagg (track); Patty Berg (golf)
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## MALE

## FEMALE

1944—Byron Nelson (golf); Ann Curtis (swimming)	1945—Byron Nelson (golf); Mildred Didrikson Zaharias (golf)	1946—Glenn Davis (football); Mildred D. Zaharias (golf)	1947—Johnny Lujack (football); Mildred D. Zaharias (golf)	1948—Lou Boudreau (baseball); Fanny Blankers-Koen (track)	1949—Leon Hart (football); Marlene Bauer (golf)	1950—Jim Konstanty (baseball); Mildred D. Zaharias (golf)	1951—Dick Kazmaier (football); Maureen Connolly (tennis)	1952—Robert Mathias (track and field); Maureen Connolly (tennis)	1953—Ben Hogan (golf); Maureen Connolly (tennis)	1954—Willie Mays (baseball); Mildred D. Zaharias (golf)	1955—Hopward (Hopsalong) Cassady (football); Patty Berg (golf)
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## POLO

POLO originated "somewhere east of Suez" but exactly where never has been determined. There is pictorial proof that it was played many centuries ago in Persia, Japan, China and Tibet, but it reached England by way of a border tribe in India known as the Manipuri. British army officers in India, about 1860, found the Manipuri playing polo and learned the game from them. The fact that the Manipuri used small native horses—they had no others—was the reason for the early height limit (14 hands) on polo mounts, from which arose the custom of calling them "polo ponies," which was abandoned in 1919.

In 1869 some officers of the 10th Hussars, returning from India, introduced the game in England and informal games were played with as many as eight players on a side. Formal competition at Hurlingham, the great shrine of the game, began in 1876 with five players on a side, which

number was cut to four in 1882. In 1884 an outstanding English player by the name of John Watson invented the backhand stroke and much improved the tactics of the game.

James Gordon Bennett, Jr., noted American newspaper owner and editor, saw polo at Hurlingham in 1875, brought the implements to this country, had a carload of cow ponies sent up from Texas and promoted a game that was played indoors at the Dickel Riding Academy at Fifth Avenue and 39th Street, New York City, in 1876. Polo moved outdoors to the Jerome Park race course and other suitable places soon after. One field on which it was played, at Fifth Avenue and 110th Street, was taken over by the New York baseball team in the National League and that is why the field on which the "Giants" play ball, although there since have been two changes in site, still is called "the Polo Grounds."

## Polo Statistics

Source: United States Polo Association.

### INTERNATIONAL MATCHES

#### Great Britain vs. United States

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|---|---|
| <p>1886 Won by Great Britain (10-4, 14-2) at Newport, R. I. Great Britain: No. 1, Capt. T. Hone; No. 2, Hon. R. Lawley; No. 3, Capt. Malcolm Little; Back, John Watson. United States: No. 1, Winthrop K. Thorne; No. 2, R. Belmont; No. 3, Foxhall P. Keene; Back, Thomas Hitchcock.</p> <p>1902 Won by Great Britain (1-2, 6-1, 7-1) at Hurlingham. Great Britain: No. 1, Cecil P. Nickalls; No. 2, P. W. Nickalls and F. M. Freake; No. 3, Walter Buckmaster and George A. Miller; Back, Charles D. Miller and Walter Buckmaster. United States: No. 1, R. L. Agassiz and J. M. Waterbury, Jr.; No. 2, J. E. Cowdin and Lawrence Waterbury; No. 3, Foxhall P. Keene; Back, Lawrence Waterbury and R. L. Agassiz.</p> <p>1909 Won by United States (9-5, 8-2) at Hurlingham. United States: No. 1, Lawrence Waterbury; No. 2, J. M. Waterbury, Jr.; No. 3, Harry Payne Whitney; Back, Devereux Milburn. Great Britain: No. 1, Capt. Herbert H. Wilson and Harry Rich; No. 2, F. M. Freake; No. 3, P. W. Nickalls; Back, Lord Wodehouse and Capt. J. Hardress Lloyd.</p> | <p>1911 Won by United States (4½-3, 4½-3½) at Meadow Brook. United States: No. 1, Lawrence Waterbury; No. 2, J. M. Waterbury, Jr.; No. 3, Harry Payne Whitney; Back, Devereux Milburn. Great Britain: No. 1, Capt. Leslie St. G. Cheape; No. 2, A. Noel Edwards; No. 3, Capt. J. Hardress Lloyd; Back, Capt. Herbert H. Wilson.</p> <p>1913 Won by United States (5½-3, 4½-4¼) at Meadow Brook. United States: No. 1, Lawrence Waterbury and Louis E. Stoddard; No. 2, J. M. Waterbury, Jr., and Lawrence Waterbury; No. 3, Harry Payne Whitney; Back, Devereux Milburn. Great Britain: No. 1, Capt. Leslie St. G. Cheape; No. 2, A. Noel Edwards and F. M. Freake; No. 3, Capt. R. G. Riltson; Back, Capt. Vivian N. Lockett.</p> <p>1914 Won by Great Britain (8½-3, 4-2¾) at Meadow Brook. Great Britain: No. 1, Capt. H. A. Tomkinson; No. 2, Capt. Leslie St. G. Cheape; No. 3, Maj. F. W. Barrett; Back, Capt. Vivian N. Lockett. United States: No. 1, Rene LaMontagne; No. 2, J. M. Waterbury, Jr.; No. 3, Devereux</p> |
|---|---|

- Milburn and Lawrence Waterbury; Back, Lawrence Waterbury and Devereux Milburn.
- 1921 Won by United States (11-4, 10-6) at Hurlingham. United States: No. 1, Louis E. Stoddard; No. 2, Thomas Hitchcock, Jr.; No. 3, J. Watson Webb; Back, Devereux Milburn. Great Britain: No. 1, Lt. Col. H. A. Tomkinson; No. 2, Maj. F. W. Barrett; No. 3, Lord Wodehouse; Back, Maj. Vivian N. Lockett.
- 1924 Won by United States (16-5, 14-5) at Meadow Brook. United States: No. 1, J. Watson Webb; No. 2, Thomas Hitchcock, Jr.; No. 3, Malcolm Stevenson and Robert E. Strawbridge Jr.; Back, Devereux Milburn. Great Britain: No. 1, Maj. T. W. Kirkwood and Lt. Col. T. P. Melvill; No. 2, Maj. F. W. Hurndall and Maj. G. H. Phipps-Hornby; No. 3, Maj. E. G. Atkinson; Back, Lewis L. Lacey.
- 1927 Won by United States (13-3, 8-5) at Meadow Brook. United States: No. 1, J. Watson Webb; No. 2, Thomas Hitchcock, Jr.; No. 3, Malcolm Stevenson; Back, Devereux Milburn. Great Britain: No. 1, Capt. Claude E. Pert and Capt. R. George; No. 2, Maj. Austin H. Williams and Capt. J. P. Dening; No. 3, Capt. C. T. I. Roark; Back, Maj. E. G. Atkinson.
- 1930 Won by United States (10-5, 14-9) at Meadow Brook. United States: No. 1, Eric Pedley; No. 2, Earle A. S. Hopping; No. 3, Thomas Hitchcock, Jr.; Back, Winston F. C. Guest. Great Britain: No. 1, Gerald Balding; No. 2, Lewis L. Lacey; No. 3, Capt. C. T. I. Roark; Back, Humphrey P. Guinness.
- 1936 Won by United States (10-9, 8-6) at Hurlingham. United States: No. 1, Eric Pedley; No. 2, Michael G. Phipps; No. 3, Stewart B. Iglehart; Back, Winston F. C. Guest. Great Britain: No. 1, Hesketh H. Hughes; No. 2, Gerald Balding; No. 3, Eric H. Tyrrell-Martin; Back, Humphrey P. Guinness.
- 1939 Won by United States (11-7, 9-4) at Meadow Brook. United States: No. 1, Michael G. Phipps; No. 2, Thomas Hitchcock, Jr.; No. 3, Stewart B. Iglehart; Back, Winston F. C. Guest. Great Britain: No. 1, Robert Skene; No. 2, Aidan Roark; No. 3, Gerald Balding; Back, Eric H. Tyrrell-Martin.

#### Argentina vs. United States

- 1928 Won by United States (7-6, 7-10, 13-7) at Meadow Brook. United States: No. 1, W. A. Harriman; No. 2, Thomas Hitchcock, Jr.; and E. A. S. Hopping; No. 3, Malcolm Stevenson and Thomas Hitchcock, Jr.; Back, Winston F. C. Guest. Argentina: No. 1, Arturo Kenny; No. 2, J. D. Nelson; No. 3, J. B. Miles; Back, Lewis L. Lacey.
- 1932 Won by United States (9-6, 7-8, 12-10) at Buenos Aires. United States: No. 1, Michael G. Phipps; No. 2, Elmer J. Boeseke, Jr.; No. 3, Winston F. C. Guest; Back, William Post, 2d. Argentina: No. 1, Arturo Kenny; No. 2, J. D. Nelson and Martin Reynal; No. 3, José Reynal; Back, Manuel Andrada.
- 1936 Won by Argentina (21-9, 8-4) at Meadow Brook. Argentina: No. 1, Luis Duggan; No. 2, Roberto Cavanagh; No. 3, Andres Gazzotti; Back, Manuel Andrada. United States: No. 1, G. H. Bostwick; No. 2, Gerald Balding; No. 3, Thomas Hitchcock, Jr.; Back, John Hay Whitney.
- 1950 Won by Argentina (14-10, 11-7) at Buenos Aires. Argentina: No. 1, Juan Cavanagh; No. 2, Roberto Cavanagh; No. 3, Enrique Alberdi; Back, Juan Carlos Alberdi. United States: No. 1, Delmar Carroll; No. 2, Peter Perkins; No. 3, George K. Oliver; Back, Lewis Smith.

#### Longden Shatters Jockey Mark

Johnny Longden broke a world record for victories by a jockey in 1956. When on Sept. 3, 1956, he rode three winners at the Del Mar (Calif.) race track, Longden boosted his number of lifetime triumphs to 4,871. The old record of 4,870 was held by Sir Gordon Richards.

#### Lefthanded Golfing King

Harry Shoemaker of Signal Mountain, Tenn., won the southpaw golfing championship of the U. S. in 1956. He triumphed with a score of 285 in the annual tournament of the National Association of Left-handers at Hickory, N. C.

#### Iowan Wins Amputee Golf

Robert Sandler, Des Moines, Ia., won the eighth annual Nation Amputee Golf Association championship with a 36-hole card of 154, at Syracuse, N. Y., on Aug. 25, 1956. Sandler, 37, lost his right arm in an accident when he was 11.

#### Gaelic Football to Galway

Galway captured the 1956 All-Ireland Gaelic football championship, defeating Cork in the final match.



# NATIONAL OPEN POLO CHAMPIONS

Not held from 1905 to 1909, inclusive; 1911, 1915, 1917, 1918, and from 1942 to 1945, inclusive.

1904—WANDERERS	1923—MEADOW BROOK	1933—AURORA	1947—OLD WESTBURY
—C. R. Snowden —J. E. Cowdin —J. M. Waterbury, Jr. Back—L. Waterbury	1—R. Belmont 2—T. Hitchcock, Jr. 3—R. E. Strawbridge, Jr. Back—D. Milburn	1—S. H. Knox 2—J. P. Mills 3—E. T. Gerry Back—E. J. Boeseke, Jr.	1—P. Silvero 2—C. C. Combs 3—S. B. Iglehart Back—G. Oliver
1910—RANELAGH	1924—MIDWICK	1934—TEMPLETON	1948—HURRICANES
—R. N. Grenfell —F. Grenfell —Earl of Rocksavage Back—F. A. Gill	1—E. G. Miller 2—E. L. Pedley 3—A. P. Perkins Back—C. F. Burke	1—M. G. Phipps 2—W. F. C. Guest 3—S. B. Iglehart Back—R. R. Guest	1—L. Sheerin 2—P. Perkins 3—C. Smith Back—S. Sanford
1912—COOPERSTOWN	1925—ORANGE COUNTY	1935—GREENTREE	1949—HURRICANES
—F. S. von Stade —C. C. Rumsey —C. P. Beadleston Back—M. Stevenson	1—W. A. Harriman 2—J. W. Webb 3—M. Stevenson Back—J. C. Cowdin	1—G. H. Bostwick 2—T. Hitchcock, Jr. 3—G. Balding Back—J. H. Whitney	1—L. Sheerin 2—R. Cavanaugh 3—C. Smith Back—S. Sanford
1913—COOPERSTOWN	1926—HURRICANES	1936—GREENTREE	1950—BOSTWICK FIELD
—F. S. von Stade —C. C. Rumsey —C. P. Beadleston Back—M. Stevenson	1—S. Sanford 2—E. L. Pedley 3—Capt. C. T. I. Roark Back—R. E. Strawbridge, Jr.	1—G. H. Bostwick 2—G. Balding 3—T. Hitchcock, Jr. Back—J. H. Whitney	1—G. H. Bostwick 2—George Oliver 3—A. L. Corey, Jr. Back—D. Milburn, Jr.
1914—MEADOW BROOK MAGPIES	1927—SANDS POINT	1937—OLD WESTBURY	1951—MILWAUKEE
—N. L. Tilney —J. W. Webb —W. G. Loew Back—H. Phipps	1—W. A. Harriman 2—T. Hitchcock, Jr. 3—J. C. Cowdin Back—L. E. Stoddard	1—M. G. Phipps 2—C. Smith 3—S. B. Iglehart Back—C. V. Whitney	1—Pedro Silvero 2—Peter Perkins 3—George Oliver Back—Bob Uihlein
1916—MEADOW BROOK	1928—MEADOW BROOK	1938—OLD WESTBURY	1952—BEVERLY HILLS
—H. Phipps —C. C. Rumsey —W. G. Loew Back—D. Milburn	1—C. V. Whitney 2—W. F. C. Guest 3—J. B. Miles Back—M. Stevenson	1—M. G. Phipps 2—C. Smith 3—S. B. Iglehart Back—C. V. Whitney	1—Bob Fletcher 2—Tony Veen 3—Bob Skene Back—Carlton Beal
1919—MEADOW BROOK	1929—HURRICANES	1939—BOSTWICK FIELD	1953—MEADOW BROOK
—F. H. Prince, Jr. —J. W. Webb —F. S. von Stade Back—D. Milburn	1—S. Sanford 2—Capt. C. T. I. Roark 3—J. W. Webb Back—R. E. Strawbridge, Jr.	1—G. H. Bostwick 2—R. L. Gerry, Jr. 3—E. T. Gerry Back—E. H. Tyrrell-Martin	1—Henry Lewis, III 2—Philip Iglehart 3—A. L. Corey, Jr. Back—G. H. Bostwick
1920—MEADOW BROOK	1930—HURRICANES	1940—AKNUSTI	1954—M. BROOK—C. C. C
—F. S. von Stade —J. W. Webb —R. E. Strawbridge, Jr. Back—D. Milburn	1—S. Sanford 2—E. L. Pedley 3—Capt. C. T. I. Roark Back—R. E. Strawbridge, Jr.	1—G. S. Smith 2—R. L. Gerry, Jr. 3—E. T. Gerry Back—A. L. Corey, Jr.	1—A. D. Beveridge 2—Paul Barry 3—A. L. Corey, Jr. Back—G. H. Bostwick
1921—GREAT NECK	1931—SANTA PAULA	1941—GULF STREAM	1955—TRIPLE C
—L. E. Stoddard —R. Wanamaker, II —J. W. Webb Back—R. E. Strawbridge, Jr.	1—A. Gazzotti 2—José Reynal 3—Juan Reynal Back—M. Andrada	1—J. H. A. Phipps 2—M. G. Phipps 3—C. S. von Stade Back—A. L. Corey, Jr.	1—A. D. Beveridge 2—Dr. W. Linfoot 3—Paul Barry Back—Harold Barry
1922—ARGENTINE	1932—TEMPLETON	1946—HERRADURA	
—J. B. Miles —J. D. Nelson —D. B. Miles Back—L. L. Lacey	1—M. G. Phipps 2—W. F. C. Guest 3—S. B. Iglehart Back—R. R. Guest	1—Gabriel Gracida 2—Guillermo Gracida 3—Alejandro Gracida Back—José Gracida	

## HORSE RACING

ANCIENT DRAWINGS on stone and bone prove that horse racing is at least 3000 years old, but Thoroughbred Racing is a modern development. Practically every thoroughbred in training today traces its registered ancestry back to one or more of three sires that arrived in England about 1728 from the Near East and became known, from the names of their owners, as the Byerly Turk, the Darley Arabian and the Godolphin Arabian. The Jockey Club (English) was founded at Newmarket in 1750 or 1751 and became the custodian of the Stud Book as well as the court of last resort in deciding turf affairs.

There was horse racing in this country before the Revolution, but the great lift to the breeding industry came with the importation in 1798, by Col. John Hoomes of Virginia, of Diomed, winner of the Epsom Derby of 1780. Diomed's lineal descendants included such famous stars of the American turf as American Eclipse and Lexington. From 1800 to the time of the Civil War there were race courses and breeding establishments plentifully scattered through Virginia, North Carolina, South Carolina, Tennessee, Kentucky and

Louisiana. In fact, thoroughbred racing was largely a Southern sport and that was one reason why the Confederacy had such excellent cavalry in the Civil War. A century ago crack horses were matched in four-mile races that were run in heat, best two out of three!

The oldest stake event in North America is the Queen's Plate, a Canadian fixture that was first run in the Province of Quebec in 1836. The oldest stake event in the United States is The Travers, which was first run at Saratoga in 1864. The gambling that goes with horse racing and trickery by jockeys, trainers, owners and track officials caused attacks on the sport by reformers and a demand among horse racing enthusiasts for an honest and effective control of some kind, but nothing of lasting value to racing came of this until the formation of The Jockey Club in 1893. The Jockey Club, composed of about sixty members chosen from the aristocracy of the turf, was all-powerful in racing regulation until the State Racing Commission came into being as a result of mutual betting and the great revenues that came with the tax on the "daily handle."

## Horse Racing Statistics

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### HISTORY OF TRADITIONAL STAKES AMERICAN DERBY

Washington Park; 3-year-olds; 1½ miles.

Run at old Washington Park, Chicago, through 1904; run at Hawthorne in 1916; run at Arlington Park in 1917. Distance 1½ miles until 1928; 1¼ miles until 1952.

Year	Winner	Jockey	Wt.	Win val.	Year	Winner	Jockey	Wt.	Win val.
1884	Modesty.....	I. Murphy.....	117	\$10,700	1931	Mate.....	G. Ellis.....	126	\$48,000
1885	Volante.....	I. Murphy.....	123	9,570	1932	Gusto.....	S. Coucci.....	118	48,200
1886	Silver Cloud.....	I. Murphy.....	121	8,160	1933	Mr. Khayyam.....	P. Walls.....	121	23,400
1887	C. H. Todd.....	Hamilton.....	118	13,690	1934	Cavalcade.....	M. Garner.....	126	23,400
1888	Emperor of Norfolk	I. Murphy.....	123	14,340	1935	Black Helen.....	D. Meade.....	118	25,400
1889	Spokane.....	T. Kiley.....	121	15,400	1937	Dawn Play.....	L. Balaski.....	116	25,400
1890	Uncle Bob.....	T. Kiley.....	115½	15,260	1940	Mioland.....	J. Adams.....	123	44,400
1891	Strathmeath.....	Covington.....	112	18,610	1941	Whirlaway.....	A. Robertson.....	126	44,400
1892	Carlsbad.....	R. Williams.....	122	16,930	1942	Alsab.....	G. Woolf.....	126	60,000
1893	Boundless.....	E. Garrison.....	122	49,500	1943	Askmenow.....	G. Woolf.....	115	56,200
1894	Rey el S'ta A'ta.....	E. Van Kuren.....	122	19,750	1944	By Jimmy.....	G. Woolf.....	122	61,000
1898	Pink Coat.....	W. Martin.....	127	9,225	1945	Fighting Step.....	G. South.....	118	68,200
1900	Sidney Lucas.....	J. Bullman.....	122	9,425	1946	Eternal Reward.....	R. Campbell.....	118	83,200
1901	Robert Waddell.....	J. Bullman.....	119	19,275	1947	Fervent.....	D. Dodson.....	118	70,000
1902	Wyeth.....	L. Lyne.....	122	19,875	1948	Citation.....	E. Arcaro.....	126	66,000
1903	The Picket.....	Helgesen.....	115	27,025	1949	Ponder.....	S. Brooks.....	126	66,000
1904	Highball.....	G. C. Fuller.....	122	26,325	1950	Hill Prince.....	E. Arcaro.....	126	60,000
1916	Dodge.....	F. Murphy.....	126	6,850	1951	Hall of Fame.....	T. Atkinson.....	122	61,000
1926	Boot to Boot.....	A. Johnson.....	121	89,000	1952	Mark-Ye-Well.....	E. Arcaro.....	120	103,400
1927	Hydromel.....	L. McDermott.....	116	22,750	1953	Native Dancer.....	E. Arcaro.....	128	66,000
1928	Toro.....	E. Ambrose.....	126	21,920	1954	Errand King.....	S. Boulmetis.....	124	68,000
1929	Windy City.....	L. McDermott.....	118	47,550	1955	Swaps.....	W. Shoemaker.....	126	89,000
1930	Reveille Boy.....	W. Fronk.....	118	51,200					

## ARLINGTON CLASSIC

Arlington Park; 3-year-olds; 1 mile.

Distance 1½ miles from 1929 to 1951, mile since 1952. Run at Washington Park In 1943, 1944, 1945.

Year	Winner	Jockey	Wt.	Win val.					
1929	Blue Larkspur	M. Garner	126	\$59,900	1942	Shut Out	E. Arcaro	126	\$69,700
1930	Gallant Fox	E. Sande	126	64,750	1943	Slide Rule	F. Zufelt	120	53,450
1931	Mate	A. Robertson	126	73,650	1944	Twilight Tear	L. Haas	114	62,050
1932	Gusto	S. Coucci	126	76,600	1945	Pot o' Luck	D. Dodson	119	67,150
1933	Inlander	R. Jones	118	32,755	1946	The Dude	M. Duhon	119	76,850
1934	Cavalcade	M. Garner	126	30,325	1947	But Why Not	W. Mehrtens	117	71,500
1935	Omaha	W. D. Wright	126	28,975	1948	Papa Redbird	R. L. Baird	122	66,600
1936	Granville	J. Stout	126	28,400	1949	Ponder	S. Brooks	126	65,450
1937	Flying Scot	J. Gilbert	123	27,375	1950	Greek Song	O. Scurlock	120	58,950
1938	Nedayr	W. D. Wright	121	27,500	1951	Hall of Fame	T. Atkinson	120	62,975
1939	Challedon	H. Richards	126	35,600	1952	Mark-Ye-Well	E. Arcaro	112	105,375
1940	Sirocco	G. Woolf	121	37,935	1953	Native Dancer	E. Guerin	126	97,725
1941	Attention	C. Bierman	121	42,450	1954	Errard King	S. Boulmetis	120	104,475
					1955	Nashua	E. Arcaro	126	91,675

## ARLINGTON FUTURITY

Arlington Park; 2-year-olds; ¾ mile.

American National Futurity in 1927 and 1928. Run at Washington Park from 1943 to 1945, inclusive.

1927	Misstep	E. Pool	122	\$ 9,360	1943	Jezrahel	O. Grohs	116	\$48,650
1928	Double Heart	L. Geving	115	21,920	1944	Free for All	O. Grohs	122	48,525
1932	Ladysman	R. Jones	117	38,010	1945	Spy Song	S. Brooks	122	58,650
1933	Far Star	D. Bellizzi	116	31,020	1946	Cosmic Bomb	S. Clark	122	66,875
1934	Toro Nancy	R. Jones	112	41,725	1947	Piet	Dell Jessop	122	66,900
1935	Grand Slam	J. Bryson	122	45,135	1948	Mr. Busher	F. Zufelt	122	62,725
1936	Case Ace	A. Robertson	117	36,540	1949	Wisconsin Boy	J. Chestnut	122	60,075
1937*	Tiger	A. Robertson	122	.....	1950	To Market	A. Rivera	122	56,215
	Teddy's Comet	G. Smith	117	18,000	1951	Hill Gail	S. Brooks	122	64,140
1938	Thingumabob	E. Arcaro	117	31,110	1952	Mr. Good	D. Dodson	122	81,575
1939	Andy K.	J. E. Oros	114	33,735	1953	Hasty Road	E. Arcaro	122	101,475
1940	Swain	J. Adams	117	34,470	1954	Royal Note	E. Arcaro	122	93,345
1941	Sun Again	W. Eads	122	34,655	1955	Swoon's Son	D. Erb	122	88,140
1942	Occupation	L. Balaski	117	51,500					

\* Dead heat.

## BELMONT FUTURITY—Belmont Park; 2-year-olds; 6½ furlongs.

Distance 1,263 yards 1 foot from 1892 to 1901, inclusive. Distance 3/4 mile prior to 1892 and from 1902 to 1924, inclusive; about 7/8 mile from 1925 to 1933, inclusive. Run at Sheephead Bay until 1910. Run at Saratoga by special arrangement in 1910, 1913 and 1914.

Year	Winner	Jockey	Wt.	Win val.					
1888	Proctor Knott	S. Barnes	112	\$40,900	1923	St. James	T. McTaggart	130	\$64,810
1889	Chaos	G. Day	109	54,500	1924	Mother Goose	L. McAtee	114	65,730
1890	Potomac	A. Hamilton	115	67,675	1925	Pompey	L. Fator	127	58,480
1891	His Highness	J. McLaughlin	130	61,675	1926	Scapa Flow	L. Fator	122	65,980
1892	Morello	W. Hayward	118	40,450	1927	Anita Peabody	C. Lang	124	91,790
1893	Domino	F. Taral	130	48,855	1928	High Strung	L. McAtee	122	97,990
1894	The Butterflies	H. Griffin	112	48,710	1929	Whichever	R. Workman	125	105,730
1895	Requital	H. Griffin	115	53,190	1930	Jamestown	L. McAtee	130	99,600
1896	Ogden	F. Turbiville	115	43,790	1931	Top Flight	R. Workman	127	94,780
1897	L'Alouette	R. Clawson	115	34,290	1932	Kerry Patch	P. Walls	122	88,690
1898	Martimas	H. Lewis	118	36,610	1933	Singing Wood	R. Jones	122	81,700
1899	Chacornac	H. Spencer	114	30,630	1934	Chance Sun	W. D. Wright	122	77,510
1900	Ballyhoo Bey	T. Sloan	112	33,580	1935	Tintale	S. Coucci	122	66,450
1901	Yankee	W. O'Connor	119	36,850	1936	Pompoon	H. Richards	127	55,630
1902	Savable	L. Lyne	119	44,500	1937	Menow	C. Kurtzinger	119	56,800
1903	Hamburg Belle	G. Fuller	114	36,600	1938	Porter's Mite	B. James	119	57,045
1904	Artful	E. Hildebrand	114	40,830	1939	Bimelech	F. A. Smith	126	57,710
1905	Ormondale	A. Redfern	117	32,960	1940	Our Boots	E. Arcaro	119	65,800
1906	Electioneer	W. Shaw	117	36,880	1941	Some Chance	W. Eads	122	57,900
1907	Colin	W. Miller	125	26,640	1942	Occupation	G. Woolf	126	57,890
1908	Maskette	J. Notter	118	26,110	1943	Occupy	G. Woolf	126	55,635
1909	Sweep	J. Butwell	126	24,100	1944	Pavot	G. Woolf	126	53,890
1910	Novelty	C. H. Shilling	127	25,360	1945	Star Pilot	A. Kirkland	126	52,940
1913	Pennant	C. Borel	119	15,060	1946	First Flight	E. Arcaro	123	73,350
1914	Trojan	C. Burlingame	117	16,010	1947	Citation	A. Snider	122	78,430
1915	Thunderer	J. Notter	122	16,590	1948	Blue Peter	E. Guerin	126	88,410
1916	Campfire	J. McTaggart	125	17,340	1949	Guillotene	T. Atkinson	122	87,585
1917	Papp	L. Allen	127	15,600	1950	Battlefield	E. Arcaro	122	81,715
1918	Dunboyne	A. Schuttinger	127	23,360	1951	Tom Fool	T. Atkinson	122	86,710
1919	Man o' War	J. Loftus	127	26,650	1952	Native Dancer	E. Guerin	122	82,845
1920	Step Lightly	F. Keogh	116	35,870	1953	Porterhouse	W. Boland	122	92,875
1921	Bunting	F. Coltietti	117	39,700	1954	Nashua	E. Arcaro	122	89,015
1922	Sally's Alley	A. Johnson	116	47,550	1955	Nail	H. Woodhouse	122	100,425



## BELMONT STAKES

Belmont Park; 3-year-olds; 1½ miles.

Run at Jerome Park prior to 1890; run at Morris Park from 1890 to 1905. Distance 1½ miles prior to 1874; reduced to 1¼ miles, 1874; reduced to 1¼ miles, 1890; changed to 1¼ miles, 1893; increased to 1½ miles, 1895; increased to 1½ miles, 1896; changed to 1½ miles in 1904 and 1905; increased to 1½ miles, 1926.

Year	Winner	Jockey	Wt.	Win val.	1910	Sweep	J. Butwell	126	\$9,700
1867	Ruthless	J. Gilpatrick	107	\$ 1,850	1913	Prince Eugene	R. Troxler	109	2,825
1868	General Duke	R. Swim	110	2,800	1914	Luke McLuke	M. Buxton	126	3,025
1869	Fenian	C. Miller	110	3,350	1915	The Finn	G. Byrne	126	1,825
1870	Kingfisher	W. Dick	110	3,750	1916	Friar Rock	E. Haynes	126	4,100
1871	Harry Bassett	W. Miller	110	5,450	1917	Hourless	J. Butwell	126	5,800
1872	Joe Daniels	J. Rowe	110	4,500	1918	Johren	F. Robinson	126	8,950
1873	Springbok	J. Rowe	110	5,200	1919	Sir Barton	J. Loftus	126	11,950
1874	Saxon	G. Bardee	110	4,200	1920	Man o' War	C. Kummer	126	7,950
1875	Calvin	R. Swim	110	4,450	1921	Grey Lag	E. Sande	126	8,650
1876	Algerine	W. Donohue	110	3,700	1922	Pillory	C. H. Miller	126	39,200
1877	Cloverbrook	C. Holloway	110	5,200	1923	Zev	E. Sande	126	38,000
1878	Duke of Magenta	L. Hughes	118	3,850	1924	Mad Play	E. Sande	126	42,800
1879	Spendthrift	S. Evans	118	4,250	1925	American Flag	A. Johnson	126	38,500
1880	Grenada	L. Hughes	118	2,800	1926	Crusader	A. Johnson	126	48,550
1881	Saunterer	T. Costello	118	3,000	1927	Chance Shot	E. Sande	126	60,900
1882	Forester	J. McLaughlin	118	2,600	1928	Vito	C. Kummer	126	63,400
1883	George Kinney	J. McLaughlin	118	3,070	1929	Blue Larkspur	M. Garner	126	59,650
1884	Panique	J. McLaughlin	118	3,150	1930	Gallant Fox	E. Sande	126	66,000
1885	Tyrant	P. Duffy	118	2,710	1931	Twenty Grand	C. Kurtzinger	126	58,700
1886	Inspector B.	J. McLaughlin	118	2,720	1932	Faireno	T. Malley	126	55,100
1886	Hanover	J. McLaughlin	118	2,900	1933	Hurryhoff	M. Garner	126	49,400
1888	Sir Dixon	J. McLaughlin	118	3,440	1934	Peace Chance	W. D. Wright	126	43,400
1889	Eric	W. Hayward	118	4,960	1935	Omaha	W. Saunders	126	35,400
1889	Burlington	S. Barnes	118	8,560	1936	Granville	J. Stout	126	29,800
1891	Foxford	E. Garrison	118½	5,070	1937	War Admiral	C. Kurtzinger	126	38,000
1892	Patron	W. Hayward	122	6,610	1938	Pasteurized	J. Stout	126	34,500
1893	Comanche	W. Simms	117	5,310	1939	Johnstown	J. Stout	126	37,000
1894	Henry of Navarre	W. Simms	117	6,680	1940	Bimelech	F. A. Smith	126	35,000
1895	Belmar	F. Taral	119	2,700	1941	Whirlaway	E. Arcaro	126	39,700
1896	Hastings	H. Griffin	122	3,025	1942	Shut Out	E. Arcaro	126	44,500
1897	Scottish Chieftain	J. Scherrer	115	3,550	1943	Count Fleet	J. Longden	126	35,300
1898	Bowling Brook	F. Littlefield	122	7,810	1944	Bounding Home	G. L. Smith	126	55,000
1899	Jean Beraud	R. Clawson	122	9,445	1945	Pavot	E. Arcaro	126	52,600
1900	Ildrim	N. Turner	126	14,790	1946	Assault	W. Mehrtens	126	75,400
1901	Commando	H. Spencer	126	11,595	1947	Phalanx	R. Donoso	126	78,900
1902	Masterman	J. Bullman	126	13,220	1948	Citation	E. Arcaro	126	77,700
1903	Africander	J. Bullman	126	12,285	1949	Capot	T. Atkinson	126	60,900
1904	Delhi	G. Odom	126	11,575	1950	Middleground	W. Boland	126	61,300
1905	Tanya	E. Hildebrand	121	17,240	1951	Counterpoint	D. Gorman	126	82,000
1906	Burgomaster	L. Lyne	126	22,700	1952	One Count	E. Arcaro	126	82,400
1907	Peter Pan	G. Mountain	126	22,765	1953	Native Dancer	E. Guerin	126	82,500
1908	Colin	J. Notter	126	22,765	1954	High Gun	E. Guerin	126	89,000
1909	Joe Madden	E. Dugan	126	24,550	1955	Nashua	E. Arcaro	126	83,100

## EPSOM DERBY

Epsom Downs, England; 3-year-olds; 1 mile, 885 yards.

Distance one mile prior to 1784. Distance 1¼ miles since 1939. Run at Newmarket from 1916 to 1918, inclusive and from 1940 to 1945, inclusive, and called the New Derby Stakes.

Year	Winner	Owner	Win val.	Year	Winner	Owner	Win val.
1780	Diomed	Sir C. Bunbury	\$ 5,620	1798	Sir Harry	Mr. Cookson	\$5,000
1781	Y. Eclipse	Mr. O'Kelly	6,255	1799	Archduke	Sir F. Standish	5,000
1782	Assassin	Lord Egremont	5,500	1800	Champion	Mr. Wilson	5,000
1783	Saltram	Mr. Parker	5,000	1801	Eleanor	Sir C. Bunbury	4,000
1784	Sergeant	Mr. O'Kelly	5,125	1802	Tyrant	Duke of Grafton	4,000
1785	Aimwell	Lord Clermont	4,375	1803	Ditto	Sir H. Williamson	4,000
1786	Noble	Mr. Panton	5,000	1804	Hannibal	Lord Egremont	4,000
1787	Sir P. Teazle	Lord Derby	4,500	1805	Card. Beaufort	Lord Egremont	6,000
1788	Sir Thomas	Prince of Wales	4,625	1806	Paris	Lord Foley	5,000
1789	Skyscraper	Duke of Bedford	4,652	1807	Election	Lord Egremont	5,000
1790	Rhadamanthus	Lord Grosvenor	4,750	1808	Pan.	Sir H. Williamson	5,000
1791	Eager	Duke of Bedford	4,625	1809	Pope	Duke of Grafton	6,000
1792	John Bull	Lord Grosvenor	4,875	1810	Whalebone	Duke of Grafton	6,000
1793	Waxy	Sir F. Poole	6,500	1811	Phantom	Sir J. Shelley	7,000
1794	Daedalus	Lord Grosvenor	6,125	1812	Octavius	Mr. Ladbrook	7,000
1795	Spread Eagle	Sir F. Standish	6,500	1813	Smolensko	Sir C. Bunbury	7,000
1796	Didelot	Sir F. Standish	6,500	1814	Blucher	Lord Stawell	7,000
1797	Colt by Fidget	Duke of Bedford	5,000	1815	Whisker	Duke of Grafton	7,000

## Epsom Derby (Cont.)

Year	Winner	Owner	Win Val.	1886	Ormonde	D. of Westminster	\$23,500
1816	Prince Leopold	Duke of York	\$7,250	1887	Mer. Hampton	Mr. Abington	22,625
1817	Azor	Mr. Payne	8,625	1888	Ayrshire	Duke of Portland	18,375
1818	Sam	Mr. Thornhill	8,500	1889	Donovan	Duke of Portland	20,250
1819	Tiresias	Duke of Portland	8,250	1890	Sanfoin	Sir J. Miller	29,700
1820	Sailor	Mr. Thornhill	7,875	1891	Common	Sir F. Johnstone	27,550
1821	Gustavus	Mr. Hunter	7,875	1892	Sir Hugo	Lord Bradford	34,900
1822	Moses	Duke of York	7,625	1893	Isinglass	Mr. McCalmont	27,575
1823	Emilius	Mr. Udny	8,375	1894	Ladas	Lord Rosebery	27,250
1824	Cedric	Sir J. Shelley	8,875	1895	Sir Visto	Lord Rosebery	27,250
1825	Middleton	Lord Jersey	9,000	1896	Persimmon	Prince of Wales	27,250
1826	Lap Dog	Lord Egremont	9,000	1897	Galtee More	Mr. Gubbins	27,250
1827	Mameluke	Lord Jersey	13,500	1898	Jeddah	J. Larnach	27,250
1828	Cadland	Duke of Rutland	13,000	1899	Flying Fox	D. of Westminster	27,250
1829	Frederick	Mr. Gratwicke	12,750	1900	Diamond Jubilee	Prince of Wales	27,250
1830	Priam	Mr. Chifney	13,500	1901	Volodyovskit	W. C. Whitney	28,350
1831	Spaniel	Lord Lowther	15,500	1902	Ard Patrick	J. Gubbins	27,250
1832	St. Giles	Mr. Ridsdale	14,375	1903	Rock Sand	Sir J. Miller	32,500
1833	Dangerous	Mr. Saddler	17,625	1904	St. Amant	L. de Rothschild	32,250
1834	Plenipotentiary	Mr. Batson	17,125	1905	Cicero	Lord Rosebery	32,250
1835	Mundig	Mr. Bowes	16,750	1906	Spearmint	Maj. E. Loder	32,250
1836	Bay Middleton	Lord Jersey	18,125	1907	Orby	R. Croker	32,250
1837	Phosphorus	Lord Berner	14,000	1908	Signorinetta	Chev. Ginistrelli	32,250
1838	Amato	Sir G. Heatcote	18,265	1909	Minoru	King Edward	32,250
1839	Bloomsbury	Mr. W. Ridsdale	19,500	1910	Lemberg	Mr. Fairie	32,250
1840	Little Wonder	Mr. Robertson	19,125	1911	Sunstar	J. B. Joel	32,250
1841	Coronation	Mr. Rawlinson	21,875	1912	Tagalie	W. Raphael	32,250
1842	Attila	Colonel Anson	24,500	1913	Aboyeur	A. P. Cunliffe	32,250
1843	Cotherstone	Mr. Bowes	21,250	1914	Durbar II†	H. B. Duryea	32,250
1844	Orlando	Colonel Peel	21,750	1915	Pommern	S. Joel	12,000
1845	Merry Monarch	Mr. Gratwick	20,000	1916	Fifinella	E. Hulton	14,500
1846	Pyrrhus the First	Mr. Gully	26,500	1917	Gay Crusader	Mr. Fairie	10,250
1847	Cossack	Mr. Pedley	26,500	1918	Gainsborough	Lady Jas. Douglas	20,000
1848	Surplice	Lord Clifton	28,000	1919	Grand Parade	Lord Glanely	32,250
1849	T. Flying Dutchman	Lord Eglinton	31,875	1920	Spion Kop	Maj. G. Loder	32,250
1850	Voltigeur	Lord Zetland	29,375	1921	Humorist	J. B. Joel	32,250
1851	Teddington	Sir J. Hawley	26,875	1922	Captain Cuttle	Lord Woolavington	51,250
1852	Dan. O'Rourke	Mr. Bowes	24,350	1923	Papyrus	Ben Irish	56,800
1853	W. Australian	Mr. Bowes	26,500	1924	Sansovino	Lord Derby	59,025
1854	Andover	Mr. Gully	29,250	1925	Manna	H. E. Morris	55,475
1855	Wild Dayrell	F. Popham	24,125	1926	Coronach	Lord Woolavington	51,750
1856	Ellinton	Admiral Harcourt	28,125	1927	Call Boy	Frank Curzon	63,075
1857	Blink Bonny	W. l'Anson	27,750	1928	Felstead	Sir H. C'cliffe-Owen	58,025
1858	Beadsman	Sir J. Hawley	26,615	1929	Trigo	W. Barnett	59,825
1859	Musjid	Sir J. Hawley	33,250	1930	Blenheim	H. H. Aga Khan	50,180
1860	Thornanby	Mr. Merry	30,500	1931	Cameronian	J. A. Dewar	48,640
1861	Kettledrum	Colonel Towneley	30,500	1932	April the Fifth	T. Walls	34,056
1862	Caractacus	Mr. Snewing	32,125	1933	Hyperion	Lord Derby	49,182
1863	Macaroni	R. C. Naylor	34,500	1934	Windsor Lad	H. H. M. of Raj'pla	46,760
1864	Blair Athol	W. l'Anson	32,500	1935	Bahram	H. H. Aga Khan	46,080
1865	Gladiateur	C'nt F. de la Grange	34,375	1936	Mahmoud	H. H. Aga Khan	49,670
1866	Lord Lyon	R. Sutton	37,750	1937	Mid-Day Sun	Mrs. G. B. Miller	47,205
1867	Hermit	Mr. Chaplin	35,000	1938	Bois Roussel	P. Beatty	43,644
1868	Blue Gown	Sir J. Hawley	34,000	1939	Blue Peter	Lord Rosebery	42,680
1869	Pretender	J. Johnstone	31,125	1940	Pont l'Eveque	F. Darling	23,803
1870	Kingcraft	Lord Falmouth	38,875	1941	Owen Tudor	Mrs. M'D'ald-Buc'n	18,003
1871	Favonius†	B. Rothschild	25,625	1942	Watling Street	Lord Derby	15,530
1872	Cremorne	H. Savile	24,250	1943	Straight Lead	Miss Dorothy Paget	17,552
1873	Doncaster	Mr. Merry	24,125	1944	Ocean Swell	Lord Rosebery	23,604
1874	Geo. Frederick	W. S. Cartwright	26,750	1945	Dante	Sir Eric Ohlson	33,356
1875	Calopin	Prince Bathany	24,750	1946	Airborne	J. E. Ferguson	38,662
1876	Kisber	A. Baltazzi	27,875	1947	Pearl Diver	B. G. de Waldner	38,788
1877	Silbilo	Lord Falmouth	30,250	1948	My Love	Aga Khan-Volterra	49,936
1878	Sefton	W. S. Crawford	29,125	1949	Nimbus	Mrs. M. Glenister	56,980
1879	Sir Bevvs	Mr. Acton	35,125	1950	Galcador	Marcel Boussac	51,030
1880	Bend Or	D. of Westminster	31,875	1951	Arctic Prince	Joseph McGrath	54,264
1881	Iroquoist†	P. Lorillard	29,625	1952	Tulyar	H. H. Aga Khan	57,353
1882	Shotover	D. of Westminster	23,875	1953	Pinza	Sir Victor Sassoon	53,530
1883	St. Blaise	Sir F. Johnstone	25,750	1954	Never Say Die†	Robert S. Clark	47,485
1884*	St. Gatien	J. Hammond		1955	Phil Drake	Mme. Suzy Volterra	52,365
	Harvester	Sir J. Willoughby	24,500				
1885	Melton	Lord Hastings	22,625				

\* Dead heat; stake divided. † American bred or owned.

## GRAND NATIONAL STEEPLECHASE

Liverpool, England; 6-year-olds and over; 4 miles, 856 yards (Aintree Course)

Year	Winner	Owner	Starters	Value	Year	Winner	Owner	Starters	Value
1839	Lottery	J. Elmore	17		1896	The Soarer	Lord Wavertree	28	\$ 9,875
1840	Jerry	Mr. Villebois	12		1897	Manifesto	H. M. Dyas	28	9,875
1841	Charity	Lord Craven	11		1898	Drogheda	C. G. Adams	25	9,875
1842	Gaylad	J. Elmore	15		1899	Manifesto	J. G. Bulteel	19	9,875
1843	Vanguard	Lord Chesterfield	16		1900	Ambush II	Prince of Wales	16	9,875
1844	Pioneer	Mr. Quartermaine	22		1901	Grudon	B. Bletsoe	24	9,875
1845	Cure All	W. S. Crawford	15		1902	Shannon Lass	A. Gorham	21	10,000
1846	Pioneer	Mr. Adams	22		1903	Dunmuree	J. S. Morrison	23	10,000
1847	Matthew	Mr. Courtenay	26		1904	Moifaa	G. H. Gollan	26	10,000
1848	Chandler	Capt. Little	30		1905	Kirkland	F. Bibby	27	10,125
1849	Peter Simple	Mr. S. Mason, Jr.	24	\$4,025	1906	Asctic's Silver	Prince Hatzfeldt	23	10,875
1850	Abd el Kader	Mr. Osborne	32		1907	Eremon	S. Howard	23	12,000
1851	Abd el Kader	Mr. Osborne	21		1908	Rubio†	Maj. F. Douglas-Pennant	24	12,000
1852	Miss Mowbray	T. F. Mason	24	3,400	1909	Lutteur III	J. Hennessy	32	12,000
1853	Peter Simple	Capt. Little	21		1910	Jenkinson	S. Howard	25	12,000
1854	Bourton	Mr. Moseley			1911	Glenside	F. Bibby	26	12,500
1855	Wanderer	Mr. Dennis	20		1912	Jerry M.	Mr. C. G. Assheton-Smith	24	16,000
1856	Freetrader	W. Barnet	21		1913	Covertcoat	Sir C. G. Assheton-Smith	22	15,875
1857	Emigrant	G. Hodgman	28	5,575	1914	Sunloch	T. Tyler	20	17,500
1858	Little Charley	C. Capel	16		1915	Ally Sloper	Lady Nelson	20	17,500
1859	Half Caste	Mr. Willoughby	20	4,200	1916*	Bermouth	P. F. Heybourn	21	5,700
1860	Anafis	C. Capel	19		1917*	Ballymacad	Sir G. Bullough	19	6,000
1861	Jealousy	J. Bennett	24	4,925	1918*	Poethlyn	Mrs. H. Peel	17	4,925
1862	Huntsman	Visc't de Namur	13		1919*	Poethlyn	Mrs. H. Peel	22	17,500
1863	Emblem	Lord Coventry	16	4,275	1920	Trotytown	Major Gerrard	24	21,875
1864	Emblematic	Lord Coventry	25		1921	Shaun Spadah	T. McAlpine	35	39,500
1865	Alcibiade	B. J. Angell	23	5,175	1922	Music Hall	Hugh Kershaw	32	35,000
1866	Salamander	Mr. Studd	30		1923	Sgt. Murphy†	Stephen Sanford	28	36,000
1867	Cortolvin	Duke of Hamilton	23	8,300	1924	Master Rob't	Lord Airlie	30	40,875
1868	The Lamb	Lord Poulett	21	7,850	1925	Double Chance	Major D. Gould	33	40,875
1869	The Colonel	Mr. Weyman	22	8,800	1926	Jack Horner	C. Schwartz	30	31,500
1870	The Colonel	M. Evans	23	7,325	1927	Spig	Mrs. M. Partridge	37	41,000
1871	The Lamb	Lord Poulett	25	8,325	1928	Tipperary Tim	H. S. Kenyon	42	55,000
1872	Casse Tete	E. Brayley	25	7,275	1929	Gregalach	Mrs. M. A. G'm'Il	66	64,000
1873	Disturbance	Capt. Machell	28	9,800	1930	Shaun Gollin	W. Midwood	41	48,000
1874	Reugny	Capt. Machell	22	9,450	1931	Grakle	C. R. Taylor	36	37,000
1875	Pathfinder	H. Bird	18	9,700	1932	Forbra	W. Parsonage	36	28,000
1876	Regal	Capt. Machell	19	7,550	1933	Kellsboro Jack†	Mrs. F. A. Clark	34	36,000
1877	Austerlitz	F. G. Hobson	16	6,450	1934	Gordon Miller	Miss D. Paget	30	36,000
1878	Shifnal	J. Nightingall	12	8,450	1935	Reynoldstown	Maj. Noel F'rlong	27	32,000
1879	The Liberator	G. Moore	18	9,500	1936	Reynoldstown	Maj. Noel F'rlong	35	35,000
1880	Empress	P. Ducrot	14	6,250	1937	Royal Mail	H. Lloyd Thomas	33	33,000
1881	Woodbrook	Capt. Kirkwood	13	4,900	1938	Battleship†	Mrs. M. Scott	36	37,000
1882	Seaman	Lord Manners	12	6,675	1939	Workman	Sir A. Maguire	37	31,000
1883	Zoedone	Prince C. Kinsky	10	4,625	1940	Bogskar	Lord Stalbridge	30	16,000
1884	Voluptuary	H. F. Boyd	15	5,175	1946	Lovely Cottage	Jock Morant	34	35,000
1885	Roquefort	A. Cooper	19	5,175	1947	Caghoo	J. J. McDowell	57	39,000
1886	Old Joe	Mr. Douglas	23	6,805	1948	Sheila's Cottage	John Proctor	43	36,000
1887	Gamecock	E. Jay	16	6,080	1949	Russian Hero	W. F. Williamson	43	37,000
1888	Playfair	Col. E. W. Baird	20	5,905	1950	Freebooter	Mrs. L. Brotherton	49	27,000
1889	Frigate	M. A. Maher	20	6,170	1951	Nickel Coin	Jeffrey Royle	36	24,000
1890	Ilex	G. Masterman	16	8,325	1952	Teal	Harry Lane	47	25,000
1891	Come Away	W. G. Jameson	21	8,400	1953	Early Mist	J. H. Griffin	31	26,000
1892	Father O'Flynn	C. G. Wilson	25	8,400	1954	Royal Tan	J. H. Griffin	29	24,000
1893	Cloister	C. G. Duff	15	9,825	1955	Quare Times	Mrs. C. Welman	34	25,000
1894	Why Not	Capt. C. H. Fenwick	14	9,875					
1895	W. M. f. Borneo	J. Widger	19	9,875					

\* Substitute race. † American bred or owned.

**"TRIPLE CROWN" WINNERS IN THE UNITED STATES**  
(Kentucky Derby, Preakness and Belmont Stakes)

Year	Horse	Owner	Year	Horse	Owner
1919	Sir Barton	J. K. L. Ross	1941	Whirlaway	Warren W.
1930	Gallant Fox	William Woodward	1943	Count Fleet	Mrs. John H.
1935	Omaha	William Woodward	1946	Assault	Robert J. Kle
1937	War Admiral	Samuel D. Riddle	1948	Citation	Warren W.



# HOLLYWOOD GOLD CUP

Hollywood Park; 3-year-olds and over; 1¼ miles.

Year	Winner, age	Jockey	Wt.	Win val.	1948	Shannon II (7).....	J. Adams.....	116	\$ 67,600
1938	Seabiscuit (5).....	G. Woolf.....	133	\$37,150	1949	Solidarity (4).....	R. Neves.....	115	100,000
1939	Kayak II (4).....	G. Woolf.....	125	35,075	1950	Noor (5).....	J. Longden.....	130	100,000
1940	Challdend (4).....	G. Woolf.....	133	36,200	1951	Citation (6).....	S. Brooks.....	120	100,000
1941	Big Pebble (5).....	J. Westrope.....	119	62,475	1952	Two Lea (6).....	H. Moreno.....	113	100,000
1944	Happy Issue (4).....	H. Woodhouse.....	119	60,600	1953	Royal Serenade (5).....	J. Longden.....	113	100,000
1945	Challenge Me (4).....	A. Skoronski.....	108	48,230	1954	Correspondent (4).....	J. Longden.....	110	100,000
1946	Triplicate (5).....	B. James.....	113	79,900	1955	Rejected (5).....	G. Glisson.....	118	100,000
1947	Cover Up (4).....	R. Permane.....	117	73,500					

# KENTUCKY DERBY

Churchill Downs; 3-year-olds; 1¼ miles

Distance 1¼ miles prior to 1896.

Year	Winner	Jockey	Wt.	Win val.	1915	Regret.....	J. Notter.....	112	\$11,450
1875	Aristides.....	O. Lewis.....	100	\$2,850	1916	George Smith.....	J. Loftus.....	117	9,750
1876	Vagrant.....	R. Swim.....	97	2,850	1917	Omar Khayyam.....	C. Borel.....	117	16,600
1877	Baden Baden.....	W. Walker.....	100	3,300	1918	Exterminator.....	W. Knapp.....	114	14,700
1878	Day Star.....	J. Carter.....	100	4,050	1919	Sir Barton.....	J. Loftus.....	112½	20,825
1879	Lord Murphy.....	C. Schauer.....	100	3,550	1920	Paul Jones.....	T. Rice.....	126	30,375
1880	Fonso.....	G. Lewis.....	105	3,800	1921	Behave Yourself.....	C. Thompson.....	126	38,450
1881	Hindoo.....	J. McLaughlin.....	105	4,410	1922	Morvich.....	A. Johnson.....	126	46,775
1882	Apollo.....	B. Hurd.....	102	4,560	1923	Zev.....	E. Sande.....	126	53,600
1883	Leonatus.....	W. Donohue.....	105	3,760	1924	Black Gold.....	J. D. Mooney.....	126	52,775
1884	Buchanan.....	I. Murphy.....	110	3,990	1925	Flying Ebony.....	E. Sande.....	126	52,950
1885	Joe Cotton.....	E. Henderson.....	110	4,630	1926	Bubbling Over.....	A. Johnson.....	126	50,075
1886	Ben Ali.....	P. Duffy.....	118	4,890	1927	Whiskery.....	L. McAttee.....	126	51,000
1887	Montrose.....	I. Lewis.....	118	4,200	1928	Reigh Count.....	C. Lang.....	126	55,375
1888	Macbeth II.....	G. Covington.....	115	4,740	1929	Clyde Van Dusen.....	L. McAttee.....	126	53,950
1889	Spokane.....	T. Kiley.....	118	4,970	1930	Gallant Fox.....	E. Sande.....	126	50,725
1890	Riley.....	I. Murphy.....	118	5,460	1931	Twenty Grand.....	C. Kertsinger.....	126	48,725
1891	Kingman.....	I. Murphy.....	122	4,680	1932	Burgoo King.....	E. James.....	126	52,350
1892	Azra.....	A. Clayton.....	122	4,230	1933	Brokers Tip.....	D. Meade.....	126	48,925
1893	Lookout.....	E. Kunze.....	122	4,090	1934	Cavalcade.....	M. Garner.....	126	28,175
1894	Chant.....	F. Goodale.....	122	4,020	1935	Omaha.....	W. Saunders.....	126	39,525
1895	Halma.....	J. Perkins.....	122	2,970	1936	Bold Venture.....	I. Hanford.....	126	37,725
1896	Ben Brush.....	W. Simms.....	117	4,850	1937	War Admiral.....	C. Kertsinger.....	126	52,050
1897	Typhoon II.....	F. Garner.....	117	4,850	1938	Lawrin.....	E. Arcaro.....	126	47,050
1898	Plaudit.....	W. Simms.....	117	4,850	1939	Johnstown.....	J. Stout.....	126	46,350
1899	Manuel.....	F. Taral.....	117	4,850	1940	Gallahadion.....	C. Bierman.....	126	60,150
1900	Lieut. Gibson.....	J. Boland.....	117	4,850	1941	Whirlaway.....	E. Arcaro.....	126	61,275
1901	His Eminence.....	J. Winkfield.....	117	4,850	1942	Shut Out.....	W. D. Wright.....	126	64,225
1902	Alan-a-Dale.....	J. Winkfield.....	117	4,850	1943	Count Fleet.....	J. Longden.....	126	60,725
1903	Judge Himes.....	H. Booker.....	117	4,850	1944	Pensive.....	C. McCreary.....	126	64,675
1904	Elwood.....	F. Prior.....	117	4,850	1945	Hoop Jr.....	E. Arcaro.....	126	64,850
1905	Agile.....	J. Martin.....	122	4,850	1946	Assault.....	W. Mehrtens.....	126	96,400
1906	Sir Huon.....	R. Troxler.....	117	4,850	1947	Jet Pilot.....	E. Guerin.....	126	92,160
1907	Pink Star.....	A. Minder.....	117	4,850	1948	Citation.....	E. Arcaro.....	126	83,400
1908	Stone Street.....	A. Pickens.....	117	4,850	1949	Ponder.....	S. Brooks.....	126	91,600
1909	Wintergreen.....	V. Powers.....	117	4,850	1950	Middleground.....	W. Boland.....	126	92,650
1910	Donau.....	F. Herbert.....	117	4,850	1951	Count Turf.....	C. McCreary.....	126	98,050
1911	Meridian.....	G. Archibald.....	117	4,850	1952	Hill Gail.....	E. Arcaro.....	126	96,300
1912	Worth.....	C. H. Shilling.....	117	4,850	1953	Dark Star.....	H. Moreno.....	126	90,050
1913	Donerail.....	R. Goose.....	117	5,475	1954	Determine.....	R. York.....	126	102,050
1914	Old Rosebud.....	J. McCabe.....	114	9,125	1955	Swaps.....	W. Shoemaker.....	126	108,400

# MASSACHUSETTS HANDICAP

Suffolk Downs; 3-year-olds and over; 1¼ miles.

Distance 1¼ miles prior to 1948.

Year	Winner, age	Jockey	Wt.	Win val.	1945	First Fiddle (6).....	J. Longden.....	121	\$42,750
1935	Top Row (4).....	G. Woolf.....	116	\$18,750	1946	Pavot (4).....	A. Kirkland.....	120	47,750
1936	Time Supply (5).....	R. Workman.....	121	23,500	1947	Tymie (6).....	C. McCreary.....	128	41,150
1937	Seabiscuit (4).....	J. Poliard.....	130	51,780	1948	Beauchef (5).....	R. Donoso.....	115	47,250
1938	Menow (3).....	N. Wall.....	107	40,550	1949	First Nighter (4).....	J. Renick.....	104	39,200
1939	Fighting Fox (4).....	J. Stout.....	113	49,250	1950	Cochise (4).....	E. Arcaro.....	120	21,400
1940	Eight Thirty (4).....	H. Richards.....	126	46,550	1951	One Hitter (5).....	T. Atkinson.....	113	22,000
1941	War Relic (3).....	T. Atkinson.....	102	48,350	1952	To Market (4).....	W. Boland.....	109	32,600
1942	Whirlaway (4).....	G. Woolf.....	130	43,850	1953	Royal Vale (5).....	J. Westrope.....	125	43,300
1943	Market Wise (5).....	V. Nodarse.....	126	39,650	1954	Wise Margin (4).....	K. Stuart.....	111	43,100
1944	First Fiddle (5).....	J. Longden.....	124	41,850	1955	Helioscope (4).....	S. Boulmetis.....	126	36,000

## PREAKNESS STAKES

Pimlico; 3-year-olds; 1½ miles

Distance 1½ miles prior to 1889; 1¼ miles in 1889; 1½ miles 1894 to 1900, inclusive, and 1908; 1 mile and 70 yards from 1901 to 1907, inclusive; 1 mile in 1909 and 1910; 1¼ miles from 1911 to 1924, inclusive. Run at Brooklyn Jockey Club's Gravesend Course from 1894 to 1908, inclusive. Run in two divisions in 1918.

Year	Winner	Jockey	Wt.	Win val.					
1873	Survivor	G. Barbee	110		1917	Kalitan	E. Haynes	116	\$ 4,800
1874	Culpepper	M. Donohue	110		1918	War Cloud	J. Loftus	117	12,250
1875	Tom Ochiltree	L. Hughes	110		1918	Jack Hare Jr.	C. Peak	115	11,250
1876	Shirley	G. Barbee	110		1919	Sir Barton	J. Loftus	126	24,500
1877	Cloverbrook	C. Holloway	110		1920	Man o' War	C. Kummer	126	23,000
1878	Duke of Magenta	C. Holloway	110		1921	Broomsun	F. Coltilletti	114	43,000
1879	Harold	W. Hughes	110	\$2,550	1922	Pillory	L. Morris	114	51,000
1880	Grenada	W. Hughes	110	2,000	1923	Vigil	B. Marinelli	114	52,000
1881	Saunterer	W. Costello	110	1,950	1924	Nellie Morse	J. Merimee	121	54,000
1882	Vanguard	W. Costello	110	1,250	1925	Coventry	C. Kummer	126	52,700
1883	Jacobus	G. Barbee	110	1,635	1926	Display	J. Maiben	126	53,625
1884	Knight of Ellerslie	S. H. Fisher	110	1,905	1927	Bostonian	A. Abel	126	53,100
1885	Tecumseh	J. McLaughlin	118	2,160	1928	Victorian	R. Workman	126	60,000
1886	The Bard	S. H. Fisher	118	2,050	1929	Dr. Freeland	L. Schaefer	126	52,325
1887	Dunboyne	W. Donohue	118	1,675	1930	Gallant Fox	E. Sande	126	51,925
1888	Refund	F. Littlefield	118	1,185	1931	Mate	G. Ellis	126	48,225
1889	Buddhist	H. Anderson	118	1,130	1932	Burgoo King	E. James	126	50,375
1894	Assignee	F. Taral	122	1,830	1933	Head Play	C. Kurtzinger	126	26,850
1895	Belmar	F. Taral	115	1,350	1934	High Quest	R. Jones	126	25,175
1896	Margrave	H. Griffin	115	1,350	1935	Omaha	W. Saunders	126	25,325
1897	Paul Kauvar	Thorpe	108	1,420	1936	Bold Venture	G. Woolf	126	27,325
1898	Sly Fox	W. Simms	120	1,450	1937	War Admiral	C. Kurtzinger	126	45,600
1899	Half Time	R. Clawson	104	1,580	1938	Dauber	M. Peters	126	51,857
1900	Hindus	H. Spencer	106	1,900	1939	Challedon	G. Seabo	126	53,710
1901	The Parader	Landry	118	1,605	1940	Bimelech	F. A. Smith	126	53,230
1902	Old England	L. Jackson	115	2,240	1941	Whirlaway	E. Arcaro	126	49,365
1903	Flocarlina	W. Gannon	113	1,875	1942	Alsab	B. James	126	58,175
1904	Bryn Mawr	E. Hildebrand	108	2,355	1943	Count Fleet	J. Longden	126	43,190
1905	Cairngorm	W. Davis	114	2,145	1944	Pensive	C. McCreary	126	60,075
1906	Whimsical	W. Miller	108	2,355	1945	Polynesian	W. D. Wright	126	66,170
1907	Don Enrique	G. Mountain	107	2,260	1946	Assault	W. Mehrtens	126	96,620
1908	Royal Tourist	E. Dugan	112	2,455	1947	Faultless	D. Dodson	126	98,005
1908	Effendi	W. Doyle	116	3,225	1948	Citation	E. Arcaro	126	91,870
1910	Layminster	R. Estep	84	3,300	1949	Capot	T. Atkinson	126	79,985
1911	Watervale	E. Dugan	112	2,700	1950	Hill Prince	E. Arcaro	126	56,115
1912	Colonel Holloway	C. Turner	107	1,450	1951	Bold	E. Arcaro	126	83,110
1913	Buskin	J. Butwell	117	1,670	1952	Blue Man	C. McCreary	126	86,135
1914	Holiday	A. Schuttinger	108	1,355	1953	Native Dancer	E. Guerin	126	65,200
1915	Rhine Maiden	D. Hoffman	104	1,275	1954	Hasty Road	J. Adams	126	91,600
1916	Damrosch	L. McAtee	115	1,380	1955	Nashua	E. Arcaro	126	67,550

## SANTA ANITA DERBY

Santa Anita Park; 3-year-olds; 1½ miles  
Distance 1½ miles prior to 1938; 1¼ miles in 1947.

Year	Winner	Jockey	Wt.	Win val.					
1935	Gille	S. Coucci	126	\$19,650	1947	On Trust	J. Longden	118	\$81,750
1936	He Did	W. D. Wright	126	26,000	1948	Salmagundi	J. Longden	118	79,800
1937	Fairy Hill	M. Peters	121	45,425	1949	Old Rockport	G. Glisson	118	94,700
1938	Stagehand	J. Westrope	118	42,350	1950	Your Host	J. Longden	118	89,800
1939	Glencia	C. Bierman	115	41,850	1951	Rough'n Tumble	E. Arcaro	118	81,500
1940	Swespidia	R. Neves	120	43,850	1952	Hill Gail	T. Atkinson	118	92,900
1941	Porter's Cap	L. Haas	120	44,975	1953	Chanlea	E. Arcaro	118	84,500
1945	Bymeabond	G. Woolf	119	37,250	1954	Determine	R. York	118	84,800
1946	Knockdown	R. Permane	122	74,680	1955	Swaps	J. Longden	118	90,400

## SANTA ANITA HANDICAP

Santa Anita Park; 3-year-olds and over; 1¼ miles.

Year	Winner, age	Jockey	Wt.	Win val.					
1935	Azucar (7)	G. Woolf	117	\$108,400	1947	Ohlavery (8)	M. Peterson	116	\$ 98,900
1936	Top Row (5)	W. D. Wright	116	104,600	1948	Talon (6)	E. Arcaro	122	102,500
1937	Rosemont (5)	H. Richards	124	90,700	1949	Vulcan's Forge (4)	D. Gorman	119	102,000
1938	Stagehand (3)	N. Wall	100	91,450	1950	Noor (5)	J. Longden	110	97,900
1939	Kayak II (4)	J. Adams	110	91,100	1951	Moonrush (5)	J. Longden	114	97,900
1940	Seabiscuit (7)	J. Pollard	130	86,650	1952	Miche (7)	J. Covalf	115	104,100
1941	Bay View (4)	N. Wall	108	89,360	1953	Mark-Ye-Well (4)	E. Arcaro	130	97,900
1945	Thumbs Up (6)	J. Longden	130	82,922	1954	Rejected (4)	W. Shoemaker	119	105,900
1946	War Knight (6)	J. Adams	115	101,205	1955	Poona II (4)	W. Shoemaker	117	103,200

## SUBURBAN HANDICAP

**Belmont Park; 3-year-olds and over; 1 1/4 miles.**

Run at Sheephead Bay prior to 1913.

Year	Winner, age	Jockey	Wt.	Win val.	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955																																																																																																									
1884	Gen. Monroe (6)	W. Donohue	124	\$ 4,945	Audacious (5)	C. Kummer	120	\$8,100	Captain Alcock (5)	C. Ponce	108	8,200	Grey Lag (5)	E. Sande	135	7,800	Mad Hatter (8)	E. Sande	125	9,150	Sting (4)	B. Bruening	122	11,600	Crusader (3)	J. Callahan	104	13,150	Crusader (4)	C. Kummer	127	11,875	Dolan (4)	J. Callahan	105	13,875	Bateau (4)	E. Ambrose	112	14,100	Petee Wrack (5)	E. Sande	122	11,850	Mokatam (4)	A. Robertson	123	11,200	White Clover II (6)	R. Workman	115	11,100	Equipoise (5)	R. Workman	132	7,250	Ladysman (4)	S. Coucci	114	5,750	Head Play (5)	C. Kurtsinger	114	12,175	Firethorn (4)	H. Richards	116	12,125	Aneroid (4)	C. Rosengarten	110	10,950	Snark (5)	J. Longden	120	17,050	Cravat (4)	J. Westrope	121	17,750	Eight Thirty (4)	H. Richards	127	19,850	Your Chance (4)	D. Meade	114	25,200	Market Wise (4)	B. James	124	27,800	Don Bingo (4)	J. Renick	104	27,600	Aletren (5)	H. Lindberg	108	39,210	Devil Diver (6)	E. Arcaro	132	34,995	Armed (5)	D. Dodson	130	43,000	Assault (4)	E. Arcaro	130	40,000	Harmonic (4)	W. Mahtens	109	39,700	Vulcan's Forge (4)	E. Arcaro	124	43,200	Loser Weeper (5)	N. Combest	115	41,400	Busanda (4)	K. Stuart	102	42,100	One Hitter (6)	T. Atkinson	112	41,900	Tom Fool (4)	T. Atkinson	128	40,400	Straight Face (4)	T. Atkinson	118	44,400	Helioscope (4)	S. Boulmetis	128	

**TRAVERS STAKES**—Saratoga; 3-year-olds; 1 1/4 miles.

Distance 1½ miles prior to 1890; 1¼ miles in 1890, 1891, and 1892; 1½ miles in 1893, 1894 and 1897; 1¼ miles in 1895, 1901, 1902, and 1903. Run as Travers Midsummer Derby from 1927 to 1932, inclusive. Run at Belmont Park from 1943 to 1945, inclusive.

Year	Winner	Jockey	Wt.	Win val.	Year	Winner	Jockey	Wt.	Win val.
1864	Kentucky.....	Gilpatrick.....	100	\$2,950	1892	Azra.....	Clayton.....	122	\$ 2,750
1865	Maiden.....	Sewell.....	97	3,400	1893	Stowaway.....	McDermott.....	107	2,450
1866	Merrill.....	Abe.....	100	3,500	1894	Henry of Navarre.....	Taral.....	125	2,350
1867	Ruthless.....	Gilpatrick.....	103	2,850	1895	Liza.....	Griffin.....	104	1,125
1868	The Banshee.....	Smith.....	97	3,150	1897	Rensselaer.....	Taral.....	126	1,425
1869	Genelg.....	C. Miller.....	110	3,000	1901	Blues.....	Shaw.....	126	6,750
1870	Kingfisher.....	C. Miller.....	110	4,950	1902	Hermis.....	Rice.....	111	6,750
1871	Harry Bassett.....	W. Miller.....	110	5,600	1903	Ada Nay.....	F. O'Neill.....	106	8,150
1872	Joe Daniels.....	J. Rowe.....	110	5,500	1904	Broomstick.....	T. Burns.....	129	5,850
1873	Tom Bowling.....	R. Swim.....	110	5,400	1905	Dandelion.....	Shaw.....	111	8,350
1874	Attila.....	Barbee.....	110	5,050	1906	Gallavant.....	W. Miller.....	111	5,800
1875	D'Artagnan.....	Barbee.....	110	4,850	1907	Frank Gill.....	Notter.....	129	5,800
1876	Sultana.....	Hayward.....	107	3,700	1908	Dorante.....	J. Lee.....	116	5,800
1877	Baden Baden.....	Sayers.....	110	4,550	1909	Hilarious.....	Scoville.....	129	5,800
1878	Duke of Magenta.....	Hughes.....	118	4,250	1910	Dalmation.....	C. H. Shilling.....	129	4,825
1879	Falsetto.....	I. Murphy.....	118	4,950	1913	Rock View.....	T. McTaggart.....	129	2,725
1880	Grenada.....	Hughes.....	118	3,750	1914	Roamer.....	J. Butwell.....	123	3,000
1881	Hindoo.....	J. McLaughlin.....	118	2,950	1915	Lady Rotha.....	M. Garner.....	106	2,150
1882	Carley B.....	Quantrell.....	115	3,450	1916	Spur.....	J. Loftus.....	129	3,125
1883	Barnes.....	J. McLaughlin.....	118	3,400	1917	Omar Khayyam.....	J. Butwell.....	129	5,350
1884	Rataplan.....	Fitzpatrick.....	118	4,150	1918	Sun Briar.....	W. Knapp.....	120	7,700
1885	Bersan.....	Spellman.....	118	4,025	1919	Hannibal.....	L. Ensor.....	120	9,835
1886	Inspector B.....	J. McLaughlin.....	118	3,825	1920	Man o' War.....	A. Schuttlinger.....	129	9,275
1887	Carey.....	Blaylock.....	118	3,825	1921	Sporting Blood.....	L. Lyke.....	116	10,275
1888	Sir Dixon.....	J. McLaughlin.....	118	4,625	1922	Little Chief.....	L. Fator.....	123	11,325
1889	Long Dance.....	Barnes.....	118	3,700	1923	Wilderness.....	B. Marinelli.....	120	13,550
1890	Sir John.....	Bergen.....	118	4,925	1924	Sun Flag.....	F. Keogh.....	115	14,675
1891	Vallera.....	R. Williams.....	122	2,900	1925	Dangerous.....	C. Kummer.....	115	13,425



## Travers Stakes (Cont.)

1926	Mars.....	F. Coltilletti.....	123	\$15,050	1941	Whirlaway.....	A. Robertson.....	130	\$16,900
1927	Brown Bud.....	L. Fator.....	120	29,925	1942	Shut Out.....	E. Arcaro.....	130	17,825
1928	Pete-Wrack.....	S. O'Donnell.....	117	30,550	1943	Eurasian.....	S. Brooks.....	112	19,850
1929	Beacon Hill.....	A. Robertson.....	117	31,820	1944	By Jimminy.....	E. Arcaro.....	126	25,012
1930	Jim Dandy.....	F. J. Baker.....	120	27,050	1945	Adonis.....	C. McCreary.....	110	28,680
1931	Twenty Grand.....	L. McAtee.....	126	33,000	1946	Natchez.....	T. Atkinson.....	124	24,750
1932	War Hero.....	J. Gilbert.....	115	23,150	1947	Young Peter.....	T. May.....	124	19,375
1933	Inlander.....	R. Jones.....	126	21,050	1948	Ace Admiral.....	T. Atkinson.....	108	19,650
1934	Observant.....	L. Humphries.....	112	14,650	1949	Arise.....	C. Errico.....	108	16,000
1935	Gold Foam.....	S. Coucci.....	112	14,675	1950	Lights Up.....	G. Hettinger.....	110	16,350
1936	Granville.....	J. Stout.....	127	14,700	1951	Battlefield.....	E. Arcaro.....	123	15,000
1937	Burning Star.....	W. D. Wright.....	117	14,550	1952	One Count.....	E. Guerin.....	126	16,450
1938	Thanksgiving.....	E. Arcaro.....	117	14,400	1953	Native Dancer.....	E. Guerin.....	126	18,850
1939	Eight Thirty.....	H. Richards.....	117	16,575	1954	Fisherman.....	H. Woodhouse.....	120	19,500
1940	Fenelon.....	J. Stout.....	122	17,425	1955	Thinking Cap.....	P. J. Bailey.....	120	19,150

## WASHINGTON PARK FUTURITY

Washington Park; 2-year-olds; 3/4 mile.

Year	Winner	Jockey	Wt.	Win val.	Year	Winner	Jockey	Wt.	Win val.
1937	Tiger.....	A. Robertson.....	117	\$26,135	1948	Model Cadet.....	A. Skoronski.....	118	\$60,750
1940	Porter's Cap.....	C. Bierman.....	117	30,780	1949	Curtice.....	O. Scurlock.....	115	57,850
1941	Alsab.....	R. L. Vedder.....	119	32,575	1950	To Market.....	A. Rivera.....	122	57,390
1942	Occupation.....	L. Balaski.....	122	58,475	1951	Oh Leo.....	P. Bailey.....	122	62,700
1943	Occupy.....	L. Whiting.....	113	43,625	1952	Mr. Paradise.....	E. Arcaro.....	116	79,710
1944	Free for All.....	O. Grohs.....	122	47,850	1953	Hasty Road.....	E. Arcaro.....	122	99,645
1945	Revoked.....	A. Bodiou.....	118	56,700	1954	Georgian.....	C. McCreary.....	116	88,380
1946	Education.....	J. Adams.....	118	65,125	1955	Swoon's Son.....	D. Erb.....	122	91,405
1947	Bewitch.....	D. Dodson.....	119	63,150					

## WIDENER

Hialeah Park; 3-year-olds and over; 1 1/4 miles

Run as Widener Challenge Cup Handicap prior to 1938. Run as Widener Handicap from 1938 to 1944, inclusive.

Year	Winner, age	Jockey	Wt.	Win val.	Year	Winner, age	Jockey	Wt.	Win val.
1936	Mantagna (4).....	E. Litzenberger.....	109	\$10,150	1947	Armed (6).....	D. Dodson.....	129	\$43,900
1937	Columbiana (4).....	H. Le Blanc.....	103	52,000	1948	El Mono (4).....	P. Roberts.....	112	43,800
1938	War Admiral (4).....	C. Kutsinger.....	130	49,550	1949	Coaltown (4).....	T. Atkinson.....	123	42,300
1939	Bull Lea (4).....	I. Anderson.....	119	46,450	1950	Royal Governor (6).....	C. Rogers.....	118	43,000
1940	Many Stings (5).....	R. Donoso.....	109	52,000	1951	Sunglow (4).....	D. Dodson.....	116	54,100
1941	Big Pebble (5).....	G. Seabo.....	109	51,800	1952	Spartan Valor (4).....	J. Stout.....	119	51,300
1942	The Rhymor (4).....	E. Arcaro.....	111	53,950	1953	Oil Capitol (6).....	C. McCreary.....	114	93,200
1944	Four Freedoms (4).....	E. Arcaro.....	109 1/2	29,350	1954	Landlocked (4).....	J. Heckmann.....	116	102,200
1946	Armed (5).....	D. Dodson.....	128	45,700	1955	Hasty Road (4).....	J. Adams.....	122	95,400

## WOOD MEMORIAL

Jamaica; 3-year-olds; 1 1/4 miles

Run as Wood Stakes prior to 1927. Distance 1 mile and 70 yards from 1926 to 1939, inclusive. Run as Wood Memorial Stakes from 1927 to 1941, inclusive. Run in two divisions in 1944, 1945, and 1947.

Year	Winner	Jockey	Wt.	Win val.	Year	Winner	Jockey	Wt.	Win val.
1925	Backbone.....	I. Parke.....	110	\$ 7,600	1942	Requested.....	W. D. Wright.....	120	\$22,900
1926	Pompey.....	B. Breuning.....	120	8,700	1943	Count Fleet.....	J. Longden.....	126	20,150
1927	Saxon.....	G. Ellis.....	117	9,050	1944	Stir Up.....	E. Arcaro.....	126	19,620
1928	Distraction.....	D. McAuliffe.....	120	11,300	1944	Lucky Draw.....	J. Longden.....	126	20,110
1929	Essare.....	M. Garner.....	110	11,000	1945	Jeep.....	A. Kirkland.....	126	18,940
1930	Gallant Fox.....	E. Sande.....	120	10,150	1945	Hoop Jr.....	E. Arcaro.....	126	18,940
1931	Twenty Grand.....	C. Kutsinger.....	120	10,200	1946	Assault.....	W. Mehrtens.....	126	22,600
1932	Universe.....	L. McAtee.....	120	10,400	1947	Phalanx.....	E. Arcaro.....	126	31,320
1933	Mr. Khayyam.....	P. Walls.....	122	3,760	1947	I Will.....	E. Arcaro.....	126	31,620
1934	High Quest.....	D. Bellizzi.....	120	3,990	1948	My Request.....	D. Dodson.....	126	34,600
1935	Today.....	R. Workman.....	112	11,350	1949	Olympia.....	E. Arcaro.....	126	31,850
1936	Teufel.....	E. Litzenberger.....	112	10,775	1950	Hill Prince.....	E. Arcaro.....	126	34,500
1937	Melodist.....	J. Longden.....	120	19,105	1951	Repetoire.....	P. McLean.....	126	35,250
1938	Fighting Fox.....	J. Stout.....	120	17,450	1952	Master Fiddle.....	D. Gorman.....	126	45,200
1939	Johnstown.....	J. Stout.....	120	17,675	1953	Native Dancer.....	E. Guerin.....	126	87,000
1940	Dit.....	L. Haas.....	120	19,225	1954	Correlation.....	W. Shoemaker.....	126	86,000
1941	Market Wise.....	D. Meade.....	120	16,650	1955	Nashua.....	T. Atkinson.....	126	75,100

## WORLD RECORDS

Distance	Horse, age, weight, track and location	Date	Time
¼	Big Racket, 4, 111, Hipodromo de las Americas, Mexico City, Mexico	February 5, 1945	:20½
2½ f.	Pichirilo, 2, 117, Hipodromo de las Americas, Mexico City, Mexico	March 5, 1954	:26½
¾	Now Now, 2, 118, Turf Paradise, Phoenix, Ariz.	February 29, 1956	:33½
3¼ f.	Joe Blair, 5, 115, Juarez, Mexico	February 5, 1916	:39
½	Manzanero, 6, 121, Hipodromo de las Americas, Mexico City, Mexico	February 5, 1954	:45½
4½ f.	Saggy, 2, 117, Havre de Grace, Md.	April 23, 1947	:51½
¾	Lucky Mel, 2, 122, Hollywood Park, Inglewood, Calif.	June 28, 1956	:56½
5¼ f.	Nance's Ace, 3, 112, Tropical Park, Coral Gables, Fla.	December 27, 1944	1:03¼
	Bold Bazooka, 2, 118, Hollywood Park, Inglewood, Calif.	July 14, 1955	1:03½
5¼ f.	Fighting Fox, 4, 126, Empire City, Yonkers, N. Y.	July 8, 1939	1:07½
	Doubtful, 4, 130, Empire City, Yonkers, N. Y.	July 18, 1942	1:07½
¾	*Gelding by Blink-Broken Tendril, 3, 123, Brighton, England	August 6, 1929	1:06½
	Bolero, 4, 122, Golden Gate Fields, Albany, Calif.	May 27, 1950	1:08½
6½ f.	Mr. Favor, 6, 124, Turf Paradise, Phoenix, Ariz.	January 15, 1956	1:15½
¾	El Drag, 4, 115, Hollywood Park, Inglewood, Calif.	May 21, 1955	1:20
1 mi.	Swaps, 4, 128, Hollywood Park, Inglewood, Calif.	June 9, 1956	1:33½
1 mi. 70 yd.	Swaps, 4, 130, Gulfstream Park, Hallandale, Fla.	April 14, 1956	1:39½
1¼	Swaps, 4, 130, Hollywood Park, Inglewood, Calif.	June 23, 1956	1:39
1¼	Noor, 5, 123, Golden Gate Fields, Albany, Calif.	June 17, 1950	1:46½
	Alidon, 4, 116, Hollywood Park, Inglewood, Calif.	July 4, 1955	1:46½
1¼	Fleet Bird, 4, 123, Golden Gate Fields, Albany, Calif.	October 24, 1953	1:52½
1¼	Noor, 5, 127, Golden Gate Fields, Albany, Calif.	June 24, 1950	1:58½
1¼	Man o' War, 3, 126, Belmont Park, Elmont, N. Y.	June 12, 1920	2:14½
1½	The Bastard, 3, 124, Newmarket, England	October 18, 1929	2:23
1½	Swaps, 4, 130, Hollywood Park, Inglewood, Calif.	July 25, 1956	2:38½
1 mi. 5½ f.	Distribute, 9, 109, River Downs, Cincinnati, Ohio	September 7, 1940	2:51½
1½	Noor, 5, 117, Santa Anita Park, Arcadia, Calif.	March 4, 1950	2:52½
1½	Pharawell, 5, 119, Gulfstream Park, Hallandale, Fla.	April 8, 1947	3:13½
2	Polazel, 3, 142, Salisbury, England	July 8, 1924	3:15
2	Winning Mark, 4, 107, Thistle Down Park, Cleveland, Ohio	July 20, 1940	3:29½
2 mi. 40 yd.	Filisteo, 7, 116, Pimlico, Baltimore, Md.	October 30, 1941	3:30½
2 mi. 70 yd.	Bookworm, 4, 120, Randall Park, North Randall, Ohio	September 4, 1954	3:30
2½	Centurion, 5, 119, Newbury, England	September 29, 1923	3:35
2½	Santiago, 5, 112, Narragansett Park, Pawtucket, R. I.	September 27, 1941	3:51½
2½	Dakota, 4, 116, Lingfield, England	May 27, 1927	3:37½
2½	Wiki Jack, 4, 97, Tijuana, Mexico	February 8, 1925	4:15
2½	Miss Grillo, 6, 118, Pimlico, Baltimore, Md.	November 12, 1948	4:14½
2½	†Worthman, 5, 101, Tijuana, Mexico	February 22, 1925	4:51½
2½	Shot Put, 4, 126, Washington Park, Homewood, Ill.	August 14, 1940	4:48½
2½	†Bosh, 5, 100, Tijuana, Mexico	March 8, 1925	5:23

\* ¾ mile course at Brighton is started from a hill and is down grade to within one-third of a mile of the finish.  
† Track heavy. ‡ Track sloppy.

## Straight Course

¼	Bob Wade, 4, 122, Butte, Mont.	August 20, 1890	:21¼
¾	King Rhymer, 2, 118, Santa Anita Park, Arcadia, Calif.	February 27, 1947	:32
½	Gloaming, 6, 127, Trentham, Wellington, New Zealand	January 12, 1921	:45
4½ f.	The Pimpernel, 2, 118, Belmont Park, Elmont, N. Y.	May 17, 1951	:49½
	Native Dancer, 2, 122, Belmont Park, Elmont, N. Y.	June 7, 1955	:49½
¾	Devineress, 3, 103, Epsom Downs, Epsom, England	June 2, 1933	:54½
5½ f.	Delegate, 7, 113, Belmont Park, Elmont, N. Y.	October 10, 1951	1:01½
¾	Vestment, 2, 115, Belmont Park, Elmont, N. Y.	October 15, 1954	1:07½
6½ f.	Porter's Mite, 2, 119, Belmont Park, Elmont, N. Y.	September 17, 1938	1:14½
	Native Dancer, 2, 122, Belmont Park, Elmont, N. Y.	September 27, 1952	1:14½
*Abt ¾	High Strung, 2, 122, Belmont Park, Elmont, N. Y.	September 15, 1928	1:19
¾	First Edition, 4, 126, Hurst Park, Hampton Court England	May 25, 1926	1:20
1	Mopsus, 3, 105, Brighton, England	June 22, 1939	1:32
1¼	Banquet, 3, 108, Monmouth Park, New Jersey	July 17, 1890	2:03½

\* 165 feet short of 7/8 mile.

## New York Wagering, Attendance Records

Type of record	Amount	Track	Date
Mutuel handle (8 races)	\$5,016,745	Belmont	September 22, 1945
Mutuel handle (7 races)	4,330,471	Jamaica*	November 8, 1945
Mutuel handle (1 race)	763,127	Belmont	September 27, 1945
Daily double	251,682	Jamaica	October 30, 1945
Attendance	64,670	Jamaica	May 30, 1945

\* Empire City meeting.

# Man o' War's Record

(Bred by August Belmont. Owned by Glen Riddle Farm.)

1919

Date	Track	Race	Dist.	Wt.	Fin.	Time	Odds	Earnings
June 6	Belmont Park	Purse	$\frac{5}{8}$ st	115	1	:59	3-5	\$ 500
June 9	Belmont Park	Keene Memorial Stakes	$5\frac{1}{2}$ f st	115	1	1:05 $\frac{5}{8}$	7-10	4,200
June 21	Jamaica	Youthful Stakes	$5\frac{1}{2}$ f	120	1	1:06 $\frac{1}{8}$	1-2	3,850
June 23	Aqueduct	Hudson Stakes	$\frac{5}{8}$	130	1	1:01 $\frac{1}{8}$	1-10	2,825
July 5	Aqueduct	Tremont Stakes	$\frac{5}{8}$	130	1	1:13	1-10	4,800
Aug. 2	Saratoga	United States Hotel Stakes	$\frac{5}{8}$	130	1	1:12 $\frac{3}{8}$	9-10	7,600
Aug. 13	Saratoga	Sanford Memorial Stakes	$\frac{5}{8}$	130	2	1:11 $\frac{1}{8}$	11-20	700
Aug. 23	Saratoga	Grand Union Hotel Stakes	$\frac{5}{8}$	130	1	1:12	11-20	7,600
Aug. 30	Saratoga	Hopeful Stakes	$\frac{5}{8}$	130	1	1:13	9-20	24,600
Sept. 13	Belmont Park	Belmont Futurity	$\frac{5}{8}$ st	127	1	1:11 $\frac{1}{8}$	1-2	26,650

Total..... \$83,325

1920

Date	Track	Race	Dist.	Wt.	Fin.	Time	Odds	Earnings
May 18	Pimlico	Preakness Stakes	$1\frac{1}{8}$	126	1	1:51 $\frac{1}{8}$	4-5	\$23,000
May 29	Belmont Park	Withers Stakes	1	118	1	1:35 $\frac{5}{8}$	1-7	4,825
June 12	Belmont Park	Belmont Stakes	$1\frac{1}{8}$	126	1	2:14 $\frac{1}{8}$	1-25	7,950
June 22	Jamaica	Stuyvesant Handicap	1	135	1	1:41 $\frac{1}{8}$	1-100	3,850
July 10	Aqueduct	Dwyer Stakes	$1\frac{1}{8}$	126	1	1:49 $\frac{1}{8}$	1-5	4,850
Aug. 7	Saratoga	Miller Stakes	$1\frac{1}{8}$	131	1	1:56 $\frac{1}{8}$	1-30	4,700
Aug. 21	Saratoga	Travers Stakes	$1\frac{1}{8}$	129	1	2:01 $\frac{1}{8}$	2-9	9,275
Sept. 4	Belmont Park	Lawrence Realization Stakes	$1\frac{1}{8}$	126	1	2:40 $\frac{1}{8}$	1-100	15,040
Sept. 11	Belmont Park	Jockey Club Stakes	$1\frac{1}{2}$	118	1	2:28 $\frac{1}{8}$	1-100	5,850
Sept. 18	Havre de Grace	Potomac Handicap	$1\frac{1}{8}$	138	1	1:44 $\frac{1}{8}$	15-100	6,800
Oct. 12	Kenilworth Park	Kenilworth Park Gold Cup	$1\frac{1}{4}$	120	1	2:03	1-20	80,000

Total..... \$166,140

## RECAPITULATION

Year	Age	Sta.	1st	2d	3d	Unp.	Earnings
1919	2	10	9	1	0	0	\$ 83,325
1920	3	11	11	0	0	0	166,140
Totals		21	20	1	0	0	\$249,465

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Address—925 Chrysler Building, New York 17, N. Y.

### Nashua Shatters Money-Winning Record

By annexing the winner's purse of \$22,750 in the Camden Handicap at Garden State Park on May 19, 1956, the 4-year-old Nashua became the biggest money-winning race horse of all time. The bay colt's earn-

ings rose to \$1,100,365. Citation previously had been the leader with earnings totaling \$1,085,760. Nashua broke the record after racing 24 times. The colt won 19 of these starts, was second three times, third once and fifth once.



# LEADING JOCKEYS SINCE 1935

Year	Jockey	Mounts	Winners	Unplaced	Pct.
1935	C. Stevenson	1,099	206	578	.19
1936	B. James	1,106	245	505	.22
1937	J. Adams	1,265	260	642	.21
1938	J. Longden	1,150	236	575	.21
1939	D. Meade	1,284	255	628	.20
1940	E. Dew	1,377	287	709	.21
1941	D. Meade	1,164	210	611	.18
1942	J. Adams	1,120	245	540	.22
1943	J. Adams	1,069	228	511	.21
1944	T. Atkinson	1,539	287	808	.19
1945	J. D. Jessop	1,085	290	445	.27
1946	T. Atkinson	1,377	233	758	.17
1947	J. Longden	1,327	316	566	.24
1948	J. Longden	1,197	319	494	.27
1949	G. Glisson	1,347	270	679	.20
1950	W. Shoemaker	1,640	388	756	.24
	J. Culmone	1,676	388	787	.23
1951	C. Burr	1,162	310	585	.24
1952	A. DeSpirito	1,482	390	633	.26
1953	W. Shoemaker	1,683	485	686	.29
1954	W. Shoemaker	1,251	380	508	.30
1955	W. Hartack	1,702	417	772	.25

# LEADING TRAINERS SINCE 1935

		(Winners saddled)			
Year	Name	Winners	Earnings	Year	Name
1935	H. Jacobs	114	\$95,155	1935	H. Jacobs
1936	H. Jacobs	177	155,789	1936	H. Jacobs
1937	H. Jacobs	134	142,474	1937	H. Jacobs
1938	H. Jacobs	109	116,609	1938	H. Jacobs
1939	H. Jacobs	106	100,907	1939	H. Jacobs
1940	D. Womeldorf	108	112,137	1940	D. Womeldorf
1941	H. Jacobs	123	165,964	1941	H. Jacobs
1942	H. Jacobs	133	186,371	1942	H. Jacobs
1943	H. Jacobs	128	210,775	1943	H. Jacobs
1944	H. Jacobs	117	306,821	1944	H. Jacobs
1945	S. Lipiec	127	238,361	1945	S. Lipiec
1946	W. Molter	122	329,725	1946	W. Molter
1947	W. Molter	155	833,970	1947	W. Molter
1948	W. Molter	184	1,015,547	1948	W. Molter
1949	W. Molter	129	696,184	1949	W. Molter
	W. H. Bishop	129	236,131		W. H. Bishop
1950	R. H. McDaniel	156	441,590	1950	R. H. McDaniel
1951	R. H. McDaniel	164	539,204	1951	R. H. McDaniel
1952	R. H. McDaniel	168	573,837	1952	R. H. McDaniel
1953	R. H. McDaniel	211	751,957	1953	R. H. McDaniel
1954	R. H. McDaniel	206	834,390	1954	R. H. McDaniel
1955	F. H. Merrill, Jr.	154	298,794	1955	F. H. Merrill, Jr.

# LEADING MONEY-WINNING OWNERS

Year	Name	Amount
1935	A. G. Vanderbilt	\$303,605
1936	Milky Way Farm Stable	206,450
1937	Mrs. Charles S. Howard	214,559
1938	H. Maxwell Howard	226,495
1939	Belair Stud	284,250
1940	Charles S. Howard	334,120
1941	Calumet Farm	475,091
1942	Greentree Stable	414,432
1943	Calumet Farm	267,915
1944	Calumet Farm	601,660
1945	Maine Chance Farm	589,170
1946	Calumet Farm	564,095
1947	Calumet Farm	1,402,436
1948	Calumet Farm	1,269,710
1949	Calumet Farm	1,128,942
1950	Brookmeade Stable	651,399
1951	Greentree Stable	637,242
1952	Calumet Farm	1,283,197
1953	A. G. Vanderbilt	987,306
1954	King Ranch	837,615
1955	Hasty House Farms	832,879

# TOP MONEY-WINNING HORSES

Year	Horse and age	Starts	1st	Amount
1935	Omaha (3)	9	6	\$142,255
1936	Granville (3)	11	7	110,295
1937	Seabiscuit (4)	15	11	168,580
1938	Stagehand (3)	15	8	189,710
1939	Challedon (3)	15	9	184,535
1940	Bimelech (3)	7	4	110,005
1941	Whirlaway (3)	20	13	272,386
1942	Shut Out (3)	12	8	238,872
1943	Count Fleet (3)	6	6	174,055
1944	Pavot (2)	8	8	179,040
1945	Busher (3)	13	10	273,735
1946	Assault (3)	15	8	424,195
1947	Armed (6)	17	11	376,325
1948	Citation (3)	20	19	709,470
1949	Ponder (3)	21	9	321,825
1950	Noor (5)	12	7	346,940
1951	Counterpoint (3)	15	7	250,525
1952	Crafty Admiral (4)	16	9	277,225
1953	Native Dancer (3)	10	9	513,425
1954	Determine (3)	15	10	328,700
1955	Nashua (3)	12	10	752,550

# Top Athletes

In 1950 the Associated Press polled the nation's sports experts on the "greats" in various fields during the past half-century. The list of winners:

Male athlete—Jim Thorpe.  
 Female athlete—Mildred D. Zaharias.  
 Baseball player—Babe Ruth.  
 Football player—Jim Thorpe.  
 Fighter—Jack Dempsey.  
 Basketball player—George Mikan.  
 Track performer—Jesse Owens.  
 Golfer—Bobby Jones.  
 Tennis player—Bill Tilden.

Swimmer—Johnny Weissmuller.  
 Race horse—Man o' War.

Greatest upset—The Boston Braves' four-straight world series victory over the Philadelphia Athletics in 1914.

Most dramatic event—Dempsey-Firpo heavyweight title fight at the Polo Grounds, New York, Sept. 14, 1923.

## WORLD ALL-TACKLE FISHING RECORDS

## Caught with Rod and Reel in Salt Water

Source: International Game Fish Association, Francesca LaMonte, Secretary.

Species	Lb., oz.	Length	Girth	Where caught	Year	Angler
Albacore	69	42"	32½"	St. Helena	1956	P. Allen
Amberjack	120—8	62"	40"	Kona, T. H.	1955	C. W. McAlpin
Barracuda	103—4	66"	31½"	West End, Bahamas	1932	C. E. Benet
Bass, Calif. Black Sea	514	86"	82"	San Clemente, Calif.	1955	J. Patterson
Bass, Calif. White Sea	83—12	65½"	34"	Baja California, Mex.	1953	L. C. Baumgardner
Bass, Channel	83	52"	29"	Cape Charles, Va.	1949	Zack Waters, Jr.
Bass, Sea	8	22"	19"	Nantucket Sound, Mass.	1951	H. R. Rider
Bass, Giant Sea	551	100"	...	Galveston Bay, Texas	1937	G. Pangarakis
Bass, Striped	73	60"	30½"	Vineyard Sound, Mass.	1913	C. B. Church
Blackfish (Tautog)	21—6	31½"	23½"	Cape May, N. J.	1954	R. N. Sheafer
Bluefish	24—3	41"	22"	San Miguel, Azores	1953	M. da Silva Veloso
Bonito, Oceanic	39—15	39"	28"	Walker Cay, Bahamas	1952	F. Drowley
Cobia	102	70"	34"	Cape Charles, Va.	1938	J. E. Stansbury
Cod	57—8	56"	...	Ambrose Lightship, N. Y.	1949	J. Rzeszewicz
Dolphin	75—8	50"	...	Mafia Channel, E. Africa	1950	A. Conan Doyle
Drum, Black	92	51½"	...	Cambridge, Md.	1955	J. Aaron
Flounder, Summer	20	37"	32"	Oak Beach, N. Y.	1948	F. H. Kessel
Kingfish	76—8	63"	31"	Bimini, Bahamas	1952	R. E. Maytag
Marlin, Blue	742	154½"	68"	Bimini, Bahamas	1949	Aksel Wichfield
Marlin, Pacific Black	1560	174"	81"	Cabo Blanco, Peru	1953	A. C. Glassell, Jr.
Marlin, Silver	755	163½"	65½"	Pinas Bay, Panama	1953	R. Dugan, Jr.
Marlin, Striped	692	161"	...	Balboa, California	1931	A. Hamann
Marlin, White	161	104"	33"	Miami, Florida	1938	L. F. Hooper
Pollock	33—8	45"	...	Belmar, N. J.	1956	G. M. Mayer
Roosterfish	100	54"	32"	Cabo Blanco, Peru	1954	M. Barrenechea
Sailfish, Atlantic	123	44"	32½"	Walker Cay, Bahamas	1950	H. Teetor
Sailfish, Pacific	221	129"	...	Santa Cruz Is., Galapagos Is.	1947	C. W. Stewart
Sawfish	736	175"	...	Galveston, Texas	1938	Gus Pangarakis
Shark, Mako	1000	144"	...	Mayor Island, N. Z.	1943	B. D. H. Ross
Shark, Porbeagle	260	48"	68½"	Durban, S. Africa	1949	J. L. Daniel
Shark, Thresher	922	...	...	Bay of Islands, N. Z.	1937	W. W. Dowding
Shark, Tiger	1382	166"	93"	Sydney Heads, Australia	1939	Lyle Bagnard
Shark, White	2536	201"	111"	Denial Bay, Australia	1955	A. Dean
Snook (Robalo)	50—8	55"	...	Gatun Spillway, Canal Zone	1944	J. W. Anderson
Swordfish	1182	179½"	78"	Iquique, Chile	1953	L. E. Marron
Tarpon	283	86 3/5"	...	Lake Maracaibo, Venezuela	1956	M. Salazar
Tuna, Allison (Yellowfin)	265	73"	53"	Makau, T. H.	1937	J. W. Harvey
Tuna, Atlantic Big-Eyed	209—6	70"	46"	Madeira	1956	A. A. Ribeiro
Tuna, Bluefin	977	116"	94½"	St. Ann Bay, Nova Scotia	1950	D. McL. Hodgson
Tuna, Pacific Big-Eyed	400	92"	62"	Cabo Blanco, Peru	1956	N. R. Knox
Weakfish	17—8	46"	19"	Mullica River, N. J.	1944	A. Weisbecker, Jr.
Weakfish, Spotted	15—3	34½"	20½"	Fort Pierce, Fla.	1949	C. W. Hubbard
Yellowtail	105—12½	65"	40"	Bahia de Topolobampo, Mexico	1955	M. A. Yant

## Caught with Rod and Reel in Fresh Water

Source: Mary Ball, Field &amp; Stream.

Black Bass, Largemouth	22—4	32½"	28½"	Montgomery Lake, Ga.	1932	George W. Perry
Black Bass, Smallmouth	11—15	27"	21½"	Dale Hollow Lake, Ky.	1955	David L. Hayes
Bluegill (Sunfish)	4—12	15"	18½"	Ketona Lake, Ala.	1950	T. S. Hudson
Carp	55—5	42"	31"	Clearwater Lake, Minn.	1952	Frank J. Ledwein
Catfish, Channel	55	50"	27"	James River, S. D.	1949	Roy A. Groves
Muskellunge	69—11	63½"	31½"	Chippewa Flowage, Wis.	1949	Louis Spray
Perch, White	4—12	19½"	13"	Messalonskee Lake, Maine	1949	Mrs. Earl Small
Perch, Yellow	4—3½	...	...	Bordentown, New Jersey	1865	Dr. C. C. Abbot
Pickeral, Eastern chain	9	30"	15"	Green Pond, N. J.	1948	Russell Kimble
Pike, Northern	46—2	52½"	25"	Sacandaga Reservoir, N. Y.	1940	Peter Dubuc
Pike, Walleyed	22—4	36½"	21"	Fort Erie, Ontario	1943	Patrick E. Noon
Salmon, Atlantic	79—2	...	...	Tanalev, Norway	1928	Henrik Henriksen
Salmon, Chinook	83	...	...	Umpqua River, Oregon	1910	F. R. Steel
Salmon, Landlocked	22—8	36"	...	Sebago Lake, Maine	1907	Edward Blakely
Salmon, Silver	31	...	...	Cowichan Bay, B. C.	1947	Mrs. Lee Hallberg
Sturgeon, White	360	111"	86"	Snake River, Idaho	1956	Willard Cravens
Trout, Brook	14—8	...	...	Nipigon River, Ontario	1916	Dr. W. J. Cook
Trout, Brown	39—8	...	...	Loch Awe, Scotland	1866	W. Muir
Trout, Dolly Varden	32	40½"	29½"	Pend Oreille Lake, Idaho	1949	N. L. Higgins
Trout, Lake	63—2	51½"	32½"	Lake Superior	1952	Hubert Hammers
Trout, Rainbow or Steelhead	37	40½"	28"	Pend Oreille Lake, Idaho	1947	Wes Hamlet

## HARNESS RACING

OLIVER WENDELL HOLMES, the famous Autocrat of the Breakfast Table, wrote that the trotting horse was a gambling toy and the trotting horse was useful and, furthermore, "horse-racing is not a republican institution; horse-trotting is." Oliver Wendell Holmes was a born and bred New Englander and New England was the nursery of the harness racing sport in America. Pacers and trotters were matters of local pride and prejudice in Colonial New England and, shortly after the Revolution, the Messenger and Justin Morgan strains produced many winners in harness racing matches" along the turnpikes of New York, Connecticut, Rhode Island, Massachusetts, Vermont and New Hampshire.

There was English thoroughbred blood in Messenger and Justin Morgan and, many years later, it was blended in Rysdyk's

Hambletonian, foaled in 1849. Hambletonian was not particularly fast under harness but his descendants have had almost a monopoly of prizes, titles and records in the harness racing game. Hambletonian was purchased as a foal with its dam for a total of \$124 by William Rysdyk of Goshen, N. Y. and made a modest fortune for the purchaser.

Trotters and pacers often were raced under saddle in the old days and, in fact, the custom still survives in some places in Europe. Dexter, the great trotter that lowered the mile record from 2:19 $\frac{3}{4}$  to 2:17 $\frac{1}{4}$  in 1867, was said to handle just as well under saddle as when pulling a sulky. But as sulkies were lightened in weight and improved in design, trotting under saddle became less common and finally faded out in this country.

## Hambletonian Winners

Three-year-old trotters. One mile. Raced at Syracuse, N. Y., 1926, 1928; at Lexington, Ky., 1927, 1929; Empire City Race Track, Yonkers, N. Y., 1943; at Goshen, N. Y., other years.

Year	Winner	Driver	Best time	Value
1926	Guy McKinney	Nat Ray	2:03 3/4	\$73,451.32
1927	Iosola's Worthy	Marvin Childs	2:03 3/4	54,694.44
1928	Spencer	W. H. Leese	2:02 1/2	66,226.25
1929	Walter Dear	W. R. Cox	2:02 3/4	60,309.60
1930	Hanover's Bertha	Tom Berry	2:03	56,859.84
1931	Calumet Butler	R. McMahon	2:03 1/4	50,921.39
1932	The Marchioness	W. Caton	2:01 1/4	49,489.26
1933	Mary Reynolds	Ben White	2:03 3/4	40,459.88
1934	Lord Jim	H. M. Parshall	2:02 3/4	25,845.44
1935	Greyhound	Sep Palin	2:02 1/4	33,321.00
1936	Rosalind	Ben White	2:01 3/4	35,643.83
1937	Shirley Hanover	H. Thomas	2:01 1/2	37,912.58
1938	McLin Hanover	H. Thomas	2:02 1/4	37,962.37
1939	Peter Astra	H. M. Parshall	2:04 1/4	40,502.46
1940	Spencer Scott	F. Egan	2:02	43,685.45
1941	Bill Gallon	Lee Smith	2:05	38,729.86
1942	The Ambassador	Ben White	2:04	38,954.38
1943	Volo Song	Ben White	2:02 1/2	42,298.03
1944	Yankee Maid	H. Thomas	2:04	33,577.12
1945	Titan Hanover	H. Pownall	2:04	50,196.96
1946	Chestertown	Tom Berry	2:02 1/2	50,995.57
1947	Hoot Mon	Sep Palin	2:00	46,267.93
1948	Demon Hanover	H. R. Hoyt	2:02	50,941.18
1949	Miss Tilly	Fred Egan	2:01 2/5	69,791.08
1950	Lusty Song	Del Miller	2:02	75,209.12
1951	Mainliner	Guy Crippen	2:02 3/5	95,263.93
1952	Sharp Note	Bi Shively	2:02 2/5	87,637.55
1953	Helicopter	Harry Harvey	2:01 3/5	117,117.98
1954	Newport Dream	Adelbert Cameron	2:02 4/5	106,830.68
1955	Scott Frost	Joe O'Brien	2:00 3/5	86,863.32

## SUMMARY OF 1956 HAMBLETONIAN

Horse and Driver	Heats			Horse and Driver	Heats		
	1st	2d	3d		1st	2d	3d
The Intruder (Ned Bower)	11	1	1	Go (Simpson)	8	16	11
Valiant Rodney (Dana Cameron)	1	3	3	Hoot Dolmont (Breneman)	12	19	7
Nimble Colby (Baldwin)	2	4	8	H. K. MacPherson (J. Fitzpatrick)	19	12	14
Imperial Princess (Avery)	14	2	4	Demon Always (Hoyt)	13	15	18
Myo Hanover (Dancer)	5	5	2	Darn Gay (Stone)	15	20	18
Millwater Victory (Miller)	9	7	6	Newport Del (Del Cameron)	16	18	16
Hotspur (Pownall)	3	6	7	Dial Tone (Hackett)	18	17	scr
Old Rodney (Parkinson)	20	9	5				
Oray (Snodgrass)	4	14	13	Times—2:03, 2:01 3/5, 2:02. Winner—owned by			
Thurston (Chapman)	6	11	10	Leonard J. Buck, Far Hills, N. J.			
Arthur (Arthur)	7	8	12	Purse distribution—The Intruder, \$59,155.15;			
Magnus Hanover (Houghton)	17	10	9	Valiant Rodney, \$24,647.97; Nimble Colby, \$9,859.19;			
Specialty (H. Fitzpatrick)	10	13	15	Egyptian Princess, \$4,929.60.			



## WORLD HARNESS RACING RECORDS

(This compilation recognizes as record-holders those horses which have made the fastest time at their gait, except and hitch, either against time or in a race at one mile.)

## Trotting on Mile Track

	Time	Driver	Date	Where made
All-age—Greyhound.....	1.55½	S. F. Palin.....	Sept. 29, 1938	Lexington, Ky.
Yearling—Airdale.....	2.15½	H. C. Moody.....	Oct. 2, 1912	Lexington, Ky.
2-year-old—Titan Hanover.....	2.00	Harry Pownall.....	Oct. 4, 1944	Lexington, Ky.
2-year-old—Scott Frost.....	2.00(r)	Joseph O'Brien.....	Oct. 5, 1954	Lexington, Ky.
3-year-old—Titan Hanover.....	1.58	Harry Pownall.....	Sept. 7, 1945	DuQuoin, Ill.
4-year-old—Greyhound.....	1.57½(r)	S. F. Palin.....	Aug. 21, 1936	Springfield, Ill.
4-year-old—Spencer Scott.....	1.57½	Fred Egan.....	Sept. 24, 1941	Lexington, Ky.
Lady driver—Dean Hanover.....	1.58½	Alma Sheppard.....	Sept. 24, 1937	Lexington, Ky.
To Wagon—Lou Dillon.....	2.00	C. K. G. Billings.....	Aug. 24, 1903	Readville, Mass.
To Wagon—Uhlán.....	2.00	C. K. G. Billings.....	Aug. 7, 1911	North Randall, Ohio
Team to Pole—Greyhound and Rosalind.....	1.58½	S. F. Palin.....	Sept. 5, 1939	Indianapolis, Ind.
Team, Three Abreast—Calumet Dubuque, Mac Aubrey, Hollyrood Boris.....	2.10½	T. F. Walsh.....	Aug. 14, 1937	Goshen, N. Y.
Team, Tandem—John R. McElwyn and Hollyrood Harrier.....	2.19½	T. F. Walsh.....	Sept. 7, 1936	Rutland, Vt.
Four-in-Hand—Damiana, Belnut, Maud V., Nutspra.....	2.30	Not recorded.....	July 4, 1896	Chicago, Ill.
Under Saddle—Greyhound.....	2.01½	Mrs. F. D. Johnson.....	Sept. 27, 1940	Lexington, Ky.
With Running Mate—Uhlán.....	1.54½	Chas. Tanner.....	Oct. 9, 1913	Lexington, Ky.

(r) Record made in race.

## Trotting on Half-mile Track

	Time	Driver	Date	Where made
All-age—Greyhound.....	1.59½	S. F. Palin.....	July 16, 1937	Goshen, N. Y.
Yearling—U. Forbes.....	2.21½	H. C. Moody.....	Sept. 18, 1913	Louisville, Ky.
2-year-old—Titan Hanover.....	2.03½ (r)	Harry Pownall.....	Sept. 19, 1944	Delaware, Ohio
3-year-old—Titan Hanover.....	2.01½	Harry Pownall.....	Sept. 18, 1945	Delaware, Ohio
4-year-old—Star's Pride.....	2.00½ (r)	Harry Pownall.....	July 13, 1951	Saratoga Spgs., N. Y.
To Wagon—Sweet Marie.....	2.08½	W. J. Andrews.....	Sept. 21, 1907	Allentown, Pa.
Team to Pole—Calumet Dubuque and Hollyrood Boris.....	2.06½	T. F. Walsh.....	Aug. 19, 1937	Skowhegan, Me.
Team, Three Abreast—David Thornton, Hollyrood Boris, Capital Stock.....	2.22½	T. F. Walsh.....	July 2, 1937	Gorham, Maine
Under Saddle—Hollyrood Boris.....	2.09	Helen James.....	Sept. 17, 1936	Brockton, Mass.

(r) Record made in race.

## Pacing on Mile Track

	Time	Driver	Date	Where made
All-age—Billy Direct.....	1.55	Vic Fleming.....	Sept. 28, 1938	Lexington, Ky.
All-age—Adios Harry.....	1.55 (r)	Luther Lyons.....	July 16, 1955	Vernon, N. Y.
Yearling—Royal Lady 2nd.....	2.14½	O. M. Powell.....	Oct. 20, 1939	Indianapolis, Ind.
2-year-old—Torpid.....	1.58 (r)	John Simpson.....	Oct. 1, 1956	Lexington, Ky.
3-year-old—Solicitor.....	1.57½	Delvin Miller.....	Oct. 1, 1951	Lexington, Ky.
3-year-old—Tar Heel.....	1.57½	Delvin Miller.....	Oct. 2, 1951	Lexington, Ky.
4-year-old—Billy Direct.....	1.55	Vic Fleming.....	Sept. 28, 1938	Lexington, Ky.
4-year-old—Adios Harry.....	1.55 (r)	Luther Lyons.....	July 16, 1955	Vernon, N. Y.
Lady Driver—Highland Scott.....	1.59½	Mrs. E. R. Harriman.....	Aug. 22, 1929	Goshen, N. Y.
To Wagon—Dan Patch.....	1.57½ (w)	M. E. McHenry.....	Oct. 27, 1903	Memphis, Tenn.
Team to Pole—Minor Heir and George Gano.....	2.02	E. J. McCarr.....	Oct. 1, 1912	Columbus, Ohio
Under Saddle—George Gano.....	2.10½	M. Anderson.....	Sept. 2, 1915	Madison, Wis.
With Running Mate—Flying Jib.....	1.58½	A. McDowell.....	Oct. 4, 1894	Chillicothe, Ohio

(w) With windshied.

## Pacing on Half-mile Track

	Time	Driver	Date	Where made
All-age—Hi-Lo's Forbes.....	1.58½ (r)	Henry Clukey.....	June 6, 1953	Westbury, N. Y.
Yearling—Lady Patch.....	2.18½	O. M. Powell.....	1924	"
2-year-old—Belle Acton.....	2.02½(r)	Stanley Dancer.....	Oct. 10, 1955	Yonkers, N. Y.
3-year-old—Tar Heel.....	2.00 (r)	Adelbert Cameron.....	Sept. 20, 1951	Columbus, Ohio
4-year-old—Adios Harry.....	1.59½ (r)	Luther Lyons.....	June 8, 1955	Westbury, N. Y.
To Wagon—Dan Patch.....	2.05 (w)	H. C. Hersey.....	Sept. 21, 1905	Allentown, Pa.
Team to Pole—Billy Direct and The Widower.....	2.04½	Chas. Fleming.....	Oct. 12, 1939	Altamont, N. Y.
Under Saddle—Zombro Hanover.....	2.06½	J. Weipert.....	Sept. 21, 1935	Newark, N. J.

\* Data unavailable.

(r) Record made in race.

(w) With windshied.

## MOTORBOATING

SINCE the source of power—the internal combustion engine—is the same in the motorboat as it is in the automobile, the history of motorboat racing parallels that of auto racing. There was a sporting risk in driving the early power boats. As soon as they began to show a degree of dependability, there came the informal rivalries of the rivers and lakes. These led to the formal contests of speed and endurance

over marked courses under the control of the American Power Boat Association. The races were severe tests of all parts of power boats and what was learned in the annual Gold Cup competition, which started in 1904, caused a great improvement in the designing of engines and hulls. The development of the outboard motor opened up another branch of power boat competition of wide popularity.

### Motorboating Statistics

Source: Bernadette M. Harper, Acting Executive Secretary, American Power Boat Association.

#### GOLD CUP WINNERS

Beginning with 1922 the race for the American Power Boat Association Gold Cup was open only to displacement boats of over 25 feet in length and powered with motors of not more than 625 inches piston displacement. In 1946 the rules were liberalized to encourage the entry of smaller, less expensive craft. Boats now are required to be between 10 and 40 feet in length, with horsepower unlimited.

Year	Winner and owner	Best heat m.p.h.	Year	Winner and owner	Best heat m.p.h.
1904	STANDARD, C. C. Riette.....	23.6	1927	GREENWICH FOLLY, G. H. Townsend.....	50.99
1904	VINGT-ET-UN II, W. Sharpe Kilmer.....	25.3	1929	IMP, R. F. Hoyt.....	50.489
1905	CHIP, J. Wainwright.....	15.9	1930	HOTSY TOTSY, V. Kliesrath.....	56.05
1906	CHIP II, J. Wainwright.....	20.6	1931	HOTSY TOTSY, V. Kliesrath-R. Hoyt.....	54.92
1907	CHIP II, J. Wainwright.....	20.8	1932	DELPHINE IV, Horace E. Dodge.....	59.21
1908	DIXIE II, E. J. Schroeder.....	30.9	1933	EL LAGARTO, G. Reis.....	60.866
1909	DIXIE II, E. J. Schroeder.....	32.9	1934	EL LAGARTO, G. Reis.....	58.06
1910	DIXIE III, F. K. Burnham.....	33.6	1935	EL LAGARTO, G. Reis.....	57.582
1911	MIT II, J. H. Hayden.....	36.1	1936	IMPISH, Horace E. Dodge.....	47.120
1912	P. D. Q. II, Alfred G. Miles.....	44.5	1937	NOTRE DAME, Herbert Mendelson.....	68.645
1913	ANKLE DEEP, C. S. Mankowski.....	50.49	1938	ALAGI, Theo Rossi.....	66.08
1914	BABY SPEED DEMON II, Paula Blackton.....	48.5	1939	MY SIN, Z. G. Simmons Jr.....	67.05
1915	MISS DETROIT, Miss Detroit P. B. A.....	49.7	1940	HOTSY TOTSY III, Sidney Allen.....	51.316
1916	MISS MINNEAPOLIS, Miss Minneapolis B. A.....	36.8	1941	MY SIN, Z. G. Simmons Jr.....	52.509
1917	MISS DETROIT II, Gar Wood.....	56.5	1945	TEMPO VI, Guy Lombardo.....	70.878
1918	MISS DETROIT III, Detroit Yachtsmen.....	52.1	1947	MISS PEPSI V, Dossin Brothers.....	57.02
1919	MISS DETROIT III, Gar Wood.....	56.3	1948	MISS GREAT LAKES, Albin Fallon.....	52.89
1920	MISS AMERICA, Gar Wood.....	70.0	1949	MY SWEETIE, E. Gregory-E. Schoenherr.....	78.645
1921	MISS AMERICA, Gar Wood.....	56.5	1950	SLO-MO-SHUN IV, Stanley S. Sayres.....	80.892
1922	PACKARD-CHRISRAFT, J. G. Vincent.....	40.6	1951	SLO-MO-SHUN V, Stanley S. Sayres.....	91.766
1923	PACKARD-CHRISRAFT, J. G. Vincent.....	44.4	1952	SLO-MO-SHUN IV, Stanley S. Sayres.....	84.355
1924	BABY BOOTLEGGER, Caleb Bragg.....	46.4	1953	SLO-MO-SHUN IV, Stanley S. Sayres.....	95.268
1925	BABY BOOTLEGGER, Caleb Bragg.....	48.4	1954	SLO-MO-SHUN V, Stanley S. Sayres.....	99.784
1926	GREENWICH FOLLY, G. H. Townsend.....	49.22	1955	GALE V, Joseph Schoenith.....	100.954

#### HARMSWORTH TROPHY WINNERS

Year	Boat and Country	Speed*	Year	Boat and Country	Speed*
1903	NAPIER I, France.....	19.53	1921	MISS AMERICA II, United States.....	59.75
1904	TREFLE-A-QUATRE, England.....	26.63	1926	MISS AMERICA V, United States.....	61.118
1905	NAPIER II, England.....	26.03	1928	MISS AMERICA VII, United States.....	59.325
1906	YARROW-NAPIER, England.....	15.48	1929	MISS AMERICA VIII, United States.....	75.287
1907	DIXIE I, United States.....	31.78	1930	MISS AMERICA IX, United States.....	77.233
1908	DIXIE II, United States.....	31.347	1931	MISS AMERICA VIII, United States.....	85.861
1910	DIXIE III, United States.....	36.04	1932	MISS AMERICA X, United States.....	78.489
1911	DIXIE IV, United States.....	40.28	1933	MISS AMERICA X, United States.....	86.939
1912	MAPLE LEAF IV, England.....	43.18	1949	SKIP-A-LONG, United States.....	94.285
1913	MAPLE LEAF IV, England.....	57.45	1950	SLO-MO-SHUN IV, United States.....	100.680
1920	MISS AMERICA I, United States.....	61.51			

\* In statute miles per hour.

† First of hydroplanes to win, predecessors being all displacement craft.

## U. S. MOTORBOAT RECORDS

## ONE MILE

Class	M.P.H.	Boat and Owner or Driver	Place	Year
U.I.M. jet	216.25	BLUEBIRD, Donald Campbell	Boulder City, Nev.	1955
Unlimited hydro	178.497	SLO-MO-SHUN IV, Stanley Sayres	Seattle, Wash.	1955
7 litre	125.436	MISS DE SOTO, George Byers	Melbourne, Ky.	1955
266 hydro	121.703	GUESS WHO, Bob Sykes	Salton Sea, Calif.	1955
255 hydro	107.238	FLYING SAUCER, Richard Hallett	Seattle, Wash.	1955
136 hydro	83.899	JERKY, Bob Boehm	Salton Sea, Calif.	1955
135 hydro	101.373	SCREAMING EAGLE IV, Bud Holloway	Salton Sea, Calif.	1955
91 hydro	78.202	DRAGON, Sam Crooks	Miami, Fla.	1955
48 hydro	87.135	TINKERTOY, Duane Allen	Salton Sea, Calif.	1955
Pacific one design hydro	62.745	LITTLE BEAVER, Marion Beaver	Salton Sea, Calif.	1955
Cracker box	83.307	HOT ICE, Carl Maginn	Salton Sea, Calif.	1955
44 cu. in. runabout	50.74	YANKEE BOY, Robert McAllister	New Martinsville, W. Va.	1955
Jersey speed skiff	56.604	JO CAROL TOO, Dan Ardolino	New Martinsville, W. Va.	1955
B rac. inb. run	72.547	LIL BEE, Ernest Rose	Seattle, Wash.	1955
D ser. inb. run	57.464	SKIP, Harry Bickford	Elizabeth City, N. C.	1955
E rac. inb. run	85.312	SLIPPER-E, Guy Wilson	Miami, Fla.	1955
E ser. inb. run	56.967	HURRICANE, Howard Abbey	Abingdon, Md.	1955
F serv. inb. run	59.712	RED EAGLE, Edison Hedges	Hollywood, Fla.	1955
K rac. inb. run	69.438	BEAVER II, Gene Gatter	Ocean City, N. J.	1955
M out. hydro	42.303	Eleanor Shakeshaft	Lake Alfred, Fla.	1955
A out. hydro	61.069	GOTTA GO VI, Jack Leek	Seattle, Wash.	1955
B out. hydro	67.296	HORNET, W. L. Tenney	Clarksville, Va.	1955
C out. hydro	68.631	HORNET XIII, W. L. Tenney	Seattle, Wash.	1955
C ser. out. hydro	57.678	HUBBA HUBBA, Lightle Samsel	Seattle, Wash.	1955
F out. hydro	75.402	ROSS GO, Burt Ross	DeLake, Ore.	1955
C serv. out. run	51.613	MISS SANTA BARBARA, Tom Newton	San Diego, Calif.	1955

## FIVE MILES IN COMPETITION

Class	M.P.H.	Boat and Owner or Driver	Place	Year
Unlimited hydro (10N)	111.742	SLO-MO-SHUN IV, Lou Fageol	Seattle, Wash.	1955
7 litre	83.877	RESTLESS, Edgar Kaiser	Newport Beach, Calif.	1955
266 hydro	87.890	ALTER EGO, Paul Sawyer	Salton Sea, Calif.	1955
225 hydro	80.433	I'M IN, Richard Hallett	Seattle, Wash.	1955
136 hydro	63.390	CAVALIER II, Wallace Rowland	New Martinsville, W. Va.	1955
135 hydro	77.519	LITTLE JOE, Morlan Visel	Salton Sea, Calif.	1955
91 hydro	60.688	PORKY, E. Burt Davidson	St. Petersburg, Fla.	1955
48 hydro	67.821	LITTLE RACKET II, J. A. Colcock	Seattle, Wash.	1955
Pacific one design hydro	57.216	LITTLE BEAVER, Marion Beaver	Salton Sea, Calif.	1955
Cracker box	68.002	HOT CINDERS, Bob Patterson	Seattle, Wash.	1955
44 cu. in. run	44.280	YANKEE BOY, Robert McAllister	Red Bank, N. J.	1955
Jersey speed skiff	46.153	SLO POKE, James Camp	Red Bank, N. J.	1955
B rac. inb. run	61.517	LIL' BEE, Ernest Rose	Salton Sea, Calif.	1955
D ser. inb. run	50.719	SKIP, Harry Bickford	Buffalo, N. Y.	1955
E ser. inb. run	52.264	ME 2, Bob Bourcq	New Orleans	1955
E rac. inb. run	72.757	E-GAD, Marion Beaver	Salton Sea, Calif.	1955
F ser. inb. run	51.843	JR. PROWLER, Forest Johnson	Buffalo, N. Y.	1955
K rac. inb. run	56.426	GEN VI, David Gerli	Washington, D. C.	1955
M out. hydro	39.045	THUM, R. D. Frawley	Lake Alfred, Fla.	1955
A out. hydro	50.237	GOTTA GO, Jack Leek	DeLake, Ore.	1955
B out. hydro	55.012	HORNET XVI, W. L. Tenney	Lakeland, Fla.	1955
C out. hydro	60.729	HORNET X, W. L. Tenney	Lakeland, Fla.	1955
C ser. out. hydro	51.078	HUBBA HUBBA, Lightle Samsel	Devils Lake, Ore.	1955
F out. hydro	63.779	ROSS GO, Burt Ross	DeLake, Ore.	1955
C ser. out. run	48.283	CROSSWIND, Bud Wiget	Lakeland, Fla.	1955

## HISTORIC PERFORMANCES IN COMPETITION

Event (distance)	M.P.H.	Boat and Owner or Driver	Place	Year
Gold Cup lap (3)	108.663	SLO-MO-SHUN V, Lou Fageol	Seattle, Wash.	1955
Gold Cup heat (30)	103.159	SLO-MO-SHUN IV, Joe Taggart	Seattle, Wash.	1955
Gold Cup race (90)	99.552	GALE V, Lee Schoenith	Seattle, Wash.	1955
Harmsworth lap (5N)	102.676	SLO-MO-SHUN IV, Lou Fageol	Detroit	1955
Harmsworth heat (40N)	100.181	SLO-MO-SHUN IV, Lou Fageol	Detroit	1955
Harmsworth race (80N)	95.623	SLO-MO-SHUN IV, Lou Fageol	Detroit	1955
President's Cup lap (3)	104.449	MISS THRIFTWAY, Bill Muncey	Washington, D. C.	1955
President's Cup heat (15)	101.427	MISS THRIFTWAY, Bill Muncey	Washington, D. C.	1955
President's Cup race (45)	95.794	MISS THRIFTWAY, Bill Muncey	Washington, D. C.	1955
Silver Cup lap (3)	100.887	SUCH CRUST III, Chuck Thompson	Detroit	1955
Silver Cup heat (12)	96.476	MISS PEPSI, Chuck Thompson	Detroit	1955
Silver Cup race (60)	84.306	SUCH CRUST III, Chuck Thompson	Detroit	1955



## AUTO RACING

THE FIRST automobiles on the road were erratic in action and driving them or even riding in them was considered a trifle risky, hence it became the sporting thing to do. Experimental excursions in crude cars gave rise to rivalry in speed over the rough roads of the Gay Nineties and this eventually led to formal contests, the first of which was a road race from Paris to Rouen in 1894, with 26 cars showing up at the starting line. Formal competition in the United States started with a road race in the Chicago district on Thanksgiving Day, 1895, and the winner, J. F. Duryea, covered the road distance of 54.36 miles at the astonishing average of 7.5 miles per hour!

Around 1900 Paris became the hub of road racing in Europe and each year there were raucous, dusty and dangerous races from Paris to Berlin, to Vienna, to Madrid

and other cities on the Continent. Accidents were so numerous to drivers and spectators that, after a gory group of mishaps in the forepart of the Paris-Madrid race of 1903, the contest was halted at Bordeaux by public authorities and all road racing was brought under control. Other kinds of auto racing were exposed to view. Some contests, including 24-hour races for stock models, were held on circular or oval tracks originally built for horse racing. Finally came the special racing strips for autos, including such famous autodromes as Brooklands in England and the Indianapolis Speedway in the United States.

As a test of engine and chassis under severe conditions and great strain, auto racing rendered invaluable assistance in the development of the motor car of today.

### National A. A. A. Champions

1909 Bert Dingley	1923 Eddie Hearne	1937 Wilbur Shaw
1910 Ray Harroun	1924 Jimmy Murphy	1938 Floyd Roberts
1925 Peter DePaolo	1911 Ralph Mulford	1939 Wilbur Shaw
1912 Ralph DePalma	1926 Harry Hartz	1940 Rex Mays
1913 Earl Cooper	1927 Peter DePaolo	1941 Rex Mays
1914 Ralph DePalma	1928 Louis Meyer	1946 Ted Horn
1915 Earl Cooper	1929 Louis Meyer	1947 Ted Horn
1916 Dario Resta	1930 Billy Arnold	1948 Ted Horn
1917 Earl Cooper	1931 Louis Schneider	1949 John Parsons
1918 Ralph Mulford	1932 Bob Carey	1950 Henry Banks
1919 Howard Wilcox	1933 Louis Meyer	1951 Tony Bettenhausen
1920 Gaston Chevrolet	1934 Bill Cummings	1952 Charles Stevenson
1921 Tommy Milton	1935 Kelly Petillo	1953 Sam Hanks
1922 Jimmy Murphy	1936 Mauri Rose	1954 Jimmy Bryan
		1955 Bob Sweikert

### History of the One-Mile Speed Mark

The first recorded effort for one mile was made in 1898 by Chasseloup-Laubat, driving a Jentaud, in France. His average was 39.23 m.p.h. This was increased to 65.79 in 1899 by Jenatzky, also in France. The first man to travel better than 100 m.p.h. was Rigolly, in 1904, at 103.56 m.p.h., followed by Baras, with 104.53 in the same year. The first over 200 m.p.h. was Major H. O. D. Segrave, who drove at 203.790 in 1927 at Daytona, Florida.

In 1947 John Cobb of London became the first person to travel more than 400 m.p.h. on land. The Englishman accomplished the

feat on Sept. 16 at Bonneville, Utah, while raising the world mile record to 394.196 m.p.h. and the world kilometer (.62137 of a mile) mark to 393.825 m.p.h.

Cobb's fastest mile was covered in 8.93 seconds and his average speed was 9.1325 seconds. The Briton drove at the rate of 385.645 m.p.h. for the mile and 388.019 for the kilometer on the southward run, then increased his pace to 403.135 m.p.h. and 399.808, respectively, on the northward sprint, the best times ever recorded.

Those who drove 300 m.p.h. or better follow (all at Bonneville):

Date	Driver	Car	Average
Sept. 3, 1935	Sir Malcolm Campbell	Bluebird Special	301.1292
Nov. 19, 1937	Capt. G. E. T. Eyston	Thunderbolt #1	311.42
Aug. 27, 1938	Capt. G. E. T. Eyston	Thunderbolt #1	345.5
Sept. 15, 1938	John Cobb	Railton	350.2
Sept. 16, 1938	Capt. G. E. T. Eyston	Thunderbolt #1	357.5
Aug. 23, 1939	John Cobb	Railton Red Lion	368.9
Sept. 16, 1947	John Cobb	Railton Mobil Special	394.196

## Indianapolis Speedway Winners

(500-mile race)

Year	Winner	Car	Second	Third	Time	Average m.p.h.
1911	Harroun	Marmion	Mulford	Bruce-Brown	6:42:08	74.59
1912	Dawson	National	Tetzloff	Hughes	6:21:08	78.70
1913	Goux	Peugeot	Wishart	Merz	6:35:05	76.92
1914	Thomas	Delarge	Duray	Guyot	6:03:45	82.47
1915	DePalma	Mercedes	Resta	Anderson	5:33:55	89.84
1916*	Resta	Peugeot	De Aleve	Mulford	5:34:17	83.26
1917-18	No races					
1919	Wilcox	Peugeot	Hearne	Goux	5:40:42	83.06
1920	Chevrolet	Monroe	Thomas	Milton	5:38:32	88.50
1921	Milton	Frontenac	Charles	Ford	5:34:44	89.62
1922	Murphy	Murphy Special	Hartz	Hearne	5:17:30	94.48
1923	Milton	H. G. S. Special	Hartz	Murphy	5:29:50	90.95
1924	Corum-Boyer	Duesenberg Special	Cooper	Murphy	5:05:23	98.23
1925	DePaolo	Duesenberg Special	Lewis	Shafer	4:56:39	101.13
1926†	Lockhart	Miller Special	Hartz	Woodbury	4:10:17	95.88
1927	Souders	Duesenberg	Devore	Gulatta	5:07:33	97.54
1928	Meyer	Miller Special	Moore	Souders	5:01:33	99.48
1929	Keech	Simplex Special	Meyer	Gleason	5:07:25	97.58
1930	Arnold	Hartz-Miller	Cantlon	Schneider	4:58:39	100.488
1931	Schneider	Bowes Special	Frame	Hepburn	5:10:28	96.529
1932	Frame	Miller Special	Wilcox	Bergere	4:48:03.79	104.144
1933	Meyer	Miller Special	Shaw	Moore	4:48:12.75	104.089
1934	Cummings	Miller Special	Rose	Moore	4:46:05.20	104.863
1935	Petillo	Gilmore Special	Shaw	Cummings	4:42:22.71	106.240
1936	Meyer	Ring Free Special	Horn	Mackenzie	4:35:03.39	109.069
1937	Shaw	Shaw-Gilmore Special	Hepburn	Horn	4:24:07.80	113.580
1938	Roberts	Burd Piston Reg. Special	Shaw	Miller	4:15:58.40	117.200
1939	Shaw	Boyle Special	Snyder	Bergere	4:20:47.39	115.035
1940	Shaw	Boyle Special	Mays	Rose	4:22:31.17	114.277
1941	Rose-Davis†	Noc-Out Hose Clamp Special	Mays	Horn	4:20:36.24	115.117
1942-45	No races					
1946	Robson	Thorne Eng. Special	Jackson	Horn	4:21:16.71	114.820
1947	Rose	Blue Crown Special	Holland	Horn	4:17:52.17	116.338
1948	Rose	Blue Crown Special	Holland	Nalon	4:10:23.38	119.813
1949	Holland	Blue Crown Special	Parsons	Connor	4:07:15.97	121.327
1950§	Parsons	Wynn's Fiction Proof Spl.	Holland	Rose	2:46:55.97	124.002
1951	Wallard	Belanger Special	Nazaruk	McGrath-Ayulo	3:57:38.05	126.244
1952	Ruttman	Agajanian Special	Rathmann	Hanks	3:52:41.88	128.922
1953	Vukovich	Fuel Injection Spl.	Cross	Hanks-Carter	3:53:01.69	128.740
1954	Vukovich	Fuel Injection Spl.	Bryan	McGrath	3:49:17.27	130.840
1955	Sweikert	John Zink Special	Bettenhausen	Davies	3:53:59.53	128.209

\* 300 miles. † Race ended at 400 miles owing to heavy rain. ‡ Davis drove 180 miles, Rose 320. § 1950 race ended at 345 miles because of rain.

## 1956 INDIANAPOLIS SPEEDWAY 500-MILE RACE

## Leading Finishers

Pos.	Driver	Car	M.P.H.	Earnings
1.	Pat Flaherty, Chicago	John Zink Spl.	128.490	\$93.81*
2.	Sam Hanks, Pacific Palisades, Calif.	Jones & Maley Spl.	128.303	32.91†
3.	Don Freedland, Los Angeles	Bob Estes Spl.	127.668	20.41‡
4.	Johnnie Parsons, Van Nuys, Calif.	Agajanian Spl.	126.631	15.76§
5.	Dick Rathmann, Trenton, N. J.	McNamara Spl.	126.133	10.74
6.	Bob Sweikert, Indianapolis	D-A Lubricant Spl.	125.489	7.59¶
7.	Bob Veith, Oakland, Calif.	Fed. Engr. Spl.	125.048	7.49**
8.	Rodger Ward, Los Angeles	Filter Queen Spl.	124.990	6.29***
9.	Jimmy Reece, Oklahoma City	Massaglia Hotels Spl.	124.938	6.04††
10.	Cliff Griffith, Indianapolis	Jim Robbins Spl.	123.471	6.19‡‡

Winner's elapsed time—3 hrs. 53 min. 28.84 sec. Laps—200.

## Mantle 5th Triple Crown Winner

Mickey Mantle of the New York Yankees in 1956 became the fifth player to win the major league triple batting crown. He led both leagues in batting (.353), in home runs (52) and in runs batted in (130). Ty Cobb led both leagues in 1909, Rogers

Hornsby in 1925, Lou Gehrig in 1934 and Ted Williams in 1942.

Only five major leaguers ever hit more home runs than Mantle did in 1956. They are Babe Ruth, with single season marks of 60, 59 and 64; Jimmy Foxx and Hank Greenberg, each with 58; Hack Wilson, 56; and Ralph Kiner, 54.

## 1956 CHAMPIONS AND RECORDS

ICE HOCKEY  
National League

## Stanley Cup Playoffs

## SERIES C—FINAL

- \*March 31—Montreal 6, Detroit 4.  
 \*April 3—Montreal 5, Detroit 1  
 April 5—Detroit 3, Montreal 1  
 April 8—Montreal 3, Detroit 0  
 \*April 10—Montreal 3, Detroit 1

\* At Montreal.

## FINAL STANDING OF THE CLUBS

	W.	L.	Pts.	Goals	
				For	Agst.
Montreal Canadiens.....	4	1	8	18	9
Detroit Red Wings.....	1	4	2	9	18

## SERIES A—SEMI-FINAL

- \*March 20—Montreal 7, New York 1  
 \*March 22—New York 4, Montreal 2  
 March 24—Montreal 3, New York 1  
 March 25—Montreal 5, New York 3  
 \*March 27—Montreal 7, New York 0

\* At Montreal.

## FINAL STANDING OF THE CLUBS

	W.	L.	Pts.	Goals	
				For	Agst.
Montreal Canadiens.....	4	1	8	24	9
New York Rangers.....	1	4	2	9	24

## SERIES B—SEMI-FINAL

- \*March 20—Detroit 3, Toronto 2  
 \*March 22—Detroit 3, Toronto 1  
 March 24—Detroit 5, Toronto 4†  
 March 27—Toronto 2, Detroit 0  
 \*March 29—Detroit 3, Toronto 1

\* At Detroit. † Overtime.

## FINAL STANDING OF THE CLUBS

	W.	L.	Pts.	Goals	
				For	Agst.
Detroit Red Wings.....	4	1	8	14	10
Toronto Maple Leafs.....	1	4	2	10	14

## Final 1955-56 Standing of the Clubs

(Regular season)

	W.	L.	T.	Pts.	Goals	
					For	Agst.
Montreal Canadiens.....	45	15	10	100	222	131
Detroit Red Wings.....	30	24	16	76	183	148
New York Rangers.....	32	28	10	74	204	203
Toronto Maple Leafs.....	24	33	13	61	153	181
Boston Bruins.....	23	34	13	59	147	185
Chicago Black Hawks....	19	39	12	50	155	216

## LEADING 1955-56 SCORERS

## Stanley Cup Playoffs

	Gms.	Gls.	As.	Pts.	PIM
Jean Beliveau, Montreal..	10	12	7	19	22
Bernie Geoffrion, Montreal	10	5	9	14	6
Maurice Richard, Montreal	10	5	9	14	24
Bert Olmstead, Montreal ..	10	4	10	14	8
Gordon Howe, Detroit....	10	3	9	12	8
Alex Delvecchio, Detroit..	10	7	3	10	2
Ted Lindsay, Detroit.....	10	6	3	9	12
Dick Moore, Montreal....	10	3	6	9	22
Henri Richard, Montreal..	10	4	4	8	21
Doug Harvey, Montreal....	10	2	5	7	10

## Regular Season

	Gms.	Gls.	As.	Pts.	PIM
Jean Beliveau, Montreal..	70	47	41	88	143
Gordie Howe, Detroit.....	70	38	41	79	100
Maurice Richard, Mont...	70	38	33	71	89
Bert Olmstead, Mont.....	70	14	56	70	94
Tod Sloan, Toronto.....	70	37	29	66	100
Andy Bathgate, N. Y.....	70	19	47	66	59
Bernie Geoffrion, Mont...	59	29	33	62	66
Earl Reibel, Detroit.....	68	17	39	56	10
Alex Delvecchio, Detroit..	70	25	26	51	24
Dave Creighton, N. Y....	70	20	31	51	43
Bill Gadsby, New York....	70	9	42	51	84
Ted Lindsay, Detroit.....	67	27	23	50	161
Red Kelly, Detroit.....	70	16	34	50	39
Dick Moore, Montreal....	70	11	39	50	55
George Armstrong, Tor...	67	16	32	48	97
Danny Lewicki, N. Y.....	70	18	27	45	26
Ron Murphy, New York....	66	16	28	44	71
Doug Harvey, Montreal....	62	5	39	44	60
Dean Prentice, New York ..	70	24	18	42	44
Wally Hergesheimer, N. Y.	70	22	18	40	26
Henri Richard, Montreal..	64	19	21	40	46
George Sullivan, Chicago..	63	14	26	40	58
Nick Mickoski, Chicago....	69	19	20	39	52
Larry Popeln, New York....	63	14	25	39	37
Ed Litzenberger, Chicago ..	70	10	29	39	36
Andy Heberton, N. Y.....	70	24	14	38	8
Vic Stasiuk, Boston.....	56	19	18	37	118
Dick Duff, Toronto.....	69	18	19	37	74
Cal Gardner, Boston.....	70	15	21	36	57
Leo LaBine, Boston.....	68	16	18	34	104
Don McKenney, Boston....	65	10	24	34	20

## 1955-56 ALL-STAR SELECTIONS

## First Team

## Second Team

Goal.....	Jacques Plante, Montreal	Hall, Detroit
Defense ...	Doug Harvey, Montreal	Kelly, Detroit
Defense ...	Bill Gadsby, New York	Johnson, Montreal
Center.....	Jean Beliveau, Montreal	Sloan, Toronto
R. W.....	Maurice Richard, Montreal	Howe, Detroit
L. W.....	Ted Lindsay, Detroit	Olmstead, Montreal

## 1955-56 TROPHY WINNERS

Hart (Most Valuable Player)—Jean Beliveau, Montreal  
 Ross (Leading Scorer)—Jean Beliveau, Montreal  
 Lady Byng (Sportsmanship)—Earl Reibel, Detroit  
 Calder (top rookie)—Glenn Hall, Detroit  
 Vezina (leading goalie)—Jacques Plante, Montreal  
 Norris (best defenseman)—Doug Harvey, Montreal

## American League

## Final 1955-56 Standing of the Clubs

(Regular Season)

	W.	L.	T.	Pts.	For	Agst.
*Providence Reds.....	45	17	2	92	263	193
Pittsburgh Hornets.....	43	17	4	90	271	186
Buffalo Bisons.....	29	30	5	63	239	250
Cleveland Barons.....	26	31	7	59	225	231
Hershey Bears.....	19	39	6	44	218	271
Springfield Indians....	17	45	2	36	212	297

\* Won playoffs.

## Leading Scorers

(Regular Season)

	Gms.	Gls.	As.	Pts.	PIM
Zellio Toppazzini, Prov...	64	42	71	113	44
Willie Marshall, Pittsbrg.	58	45	52	97	47
Camille Henry, Prov.....	59	50	41	91	8
Ken Wharam, Buffalo....	59	27	63	90	27
Duncan Fisher, Hershey ..	60	40	43	83	73
Paul Larivee, Providence..	54	27	53	80	38
Fred Glover, Cleveland....	64	31	48	79	187
Larry Wilson, Buffalo....	62	39	39	78	74
Bob Solinger, Pittsburgh..	63	27	46	73	74
Cal Stearns, Cleveland....	63	35	36	71	28
Harry Pidbirtny, Sprgfield.	63	32	39	71	16



## Ice Hockey (cont.)

## Western League

Final 1955-56 Standing of the Clubs  
(Regular Season)

## COAST DIVISION

	W.	L.	T.	Pts.	Goals For	Goals Agst.
Vancouver Canucks....	38	28	4	80	252	181
Victoria Cougars.....	35	30	5	75	206	196
New Westminster Royals	31	37	2	64	238	258
Seattle Americans.....	31	37	2	64	201	243

## PRAIRIE DIVISION

	W.	L.	T.	Pts.	Goals For	Goals Agst.
*Winnipeg Warriors....	40	28	2	82	248	212
Calgary Stampers.....	40	30	0	80	292	242
Edmonton Flyers.....	33	34	2	69	235	256
Saskatoon Quakers.....	27	35	8	62	208	248
Brandon Regals.....	23	39	8	54	199	243

\* Won playoffs.

## Leading Scorers

(Regular Season)

	Gms.	Gl.	As.	Pts.	PIM
Phil Maloney, Vancouver	70	37	58	95	14
Gerry Melnyk, Edmonton	70	37	50	87	37
Bobby Love, New Wmstr.	69	23	64	87	4
Blinky Boyce, New West.	70	35	50	85	22
Jack McLeod, Saskatoon.	70	34	49	83	97
Gerry Couture, Calgary..	66	32	50	82	10
Colin Kilburn, Victoria..	70	43	38	81	86
Gordon Fashoway, New Westminster.....	69	47	32	79	16
Sid Finney, Calgary.....	69	43	36	79	24
Guyle Fielder, Seattle....	70	18	61	79	42

## Quebec League

## Final 1955-56 Standing of the Clubs

	W.	L.	T.	Pts.	Goals For	Goals Agst.
Shawinigan Cataracts..	43	18	3	89	243	166
*Montreal Royals.....	34	23	7	75	192	162
Chicoutimi Saguenéens	32	28	4	68	212	188
Quebec Aces.....	23	37	4	50	190	230
Three Rivers Lions.....	18	44	2	38	159	250

\* Won Playoffs.

## Leading Scorers

(Regular Season)

	Gms.	Gl.	As.	Pts.	PIM
Gilles Dube, Shawinigan.	64	37	54	91	68
Jimmy Moore, Chicoutimi	61	32	50	82	102
Andre Corriveau, Montreal	62	37	40	77	2
Lou Smrke, Chicoutimi..	59	22	47	69	40
Jean Denis, Shawinigan..	59	24	42	66	63
Ed Kachur, Shawinigan..	64	31	34	65	91
Kelly Burnett, Montreal.	58	25	40	65	22
Ludger Tremblay, Quebec	63	23	40	63	12
Erwin Grosse, Shawinigan	55	21	41	62	27
Stanley Smrke, Chicoutimi	45	26	32	58	20

## RACQUETS

U. S. singles—Geoffrey W. T. Atkins, Chicago

U. S. doubles—Stanley Pearson, Philadelphia-Charles B. Pearson, New York

Tuxedo Gold Racquet—Geoffrey W. T. Atkins

Canadian singles—Geoffrey W. T. Atkins

Canadian doubles—Clarence C. Pell, Jr.-Frederick F. de Rham, New York

## COURT TENNIS

U. S. open—Albert (Jack) Johnson, New York

U. S. amateur singles—Alastair B. Martin, Glen Head, N. Y.

U. S. amateur doubles—Northrup Knox, Buffalo, N. Y.-Alastair B. Martin

Tuxedo Gold Racquet—William Lingelbach, Philadelphia

Intercollegiate team (Van Alen Cup)—Harvard

## SQUASH TENNIS

U. S. singles—H. Robert Reeve, New York A. C.

U. S. veterans—J. Lenox Porter, Yale Club

## Amateur Ice Hockey

## Eastern League

FINAL 1955-56 STANDING OF THE CLUBS  
(Regular Season)

	W.	L.	T.	Pts.	Goals For	Goals Agst.
*New Haven.....	43	18	3	89	318	206
Clinton.....	33	28	3	69	298	269
Washington.....	33	28	3	69	253	267
Johnstown.....	32	32	0	64	312	298
Baltimore.....	23	40	1	47	236	327
Philadelphia.....	23	41	0	46	246	301

\* Won Playoffs.

## International League

FINAL 1955-56 STANDING OF THE CLUBS  
(Regular Season)

	W.	L.	T.	Pts.	Goals For	Goals Agst.
*Cincinnati.....	45	13	2	92	336	159
Troy.....	39	20	1	79	216	152
Fort Wayne.....	29	29	2	60	272	219
Toledo-Marion.....	25	30	5	55	178	229
Grand Rapids.....	24	33	3	51	198	237
Indianapolis.....	11	48	1	23	126	330

\* Won Playoffs.

## OTHER CHAMPIONS, 1956

## Canada

Edinburgh Trophy (professional championship of Canada)—

Winnipeg Warriors defeated Montreal Royals, 5 games to 1.

Allan Cup (senior amateur)—Vernon Canadiens.

Memorial Cup (junior amateur)—Toronto Marlboros.

Intercollegiate—University of Toronto.

## United States

National Amateur (Senior)—Portage Lake, Hancock, Mich.

National Amateur (Junior)—Arrowsmith H. C., Detroit

National Collegiate—University of Michigan.

Ivy League—Harvard

National Pee Wee—East Houghton, Mich.

## BADMINTON

Source: Hans Rogind, National Publicity Chairman,  
American Badminton Assn.

## U. S. Championships

(At Philadelphia, April 4-7)

Singles—Finn Kobbero, Copenhagen, Denmark

Doubles—Finn Kobbero-J. Hammergaard, Copenhagen

Women's singles—Judith Devlin, Baltimore

Women's doubles—Ethel Marshall-Bea Massman, Buffalo,  
N. Y.

Mixed doubles—Finn Kobbero-Judith Devlin

## U. S. Junior

(At Detroit, March 24-26)

Singles—Gary McFarlane, Lewiston, N. Y.

Doubles—Bill Bryant-Russ Paquette, Detroit

Girls' singles—MacGregor Stewart, Baltimore

Girls' doubles—Norma Slauer, Marblehead, Mass.-MacGregor  
Stewart

Mixed doubles—Marcia Dotson, St. Paul, Minn.-Bill Bryant

## All-England

## UNOFFICIAL WORLD CHAMPIONSHIP

(At London, March 14-17)

Singles—Eddy Choong, Malaya

Doubles—Finn Kobbero-J. Hammergaard, Denmark

Women's singles—Margaret Varner, United States (Boston)

Women's doubles—Judith and Susan Devlin, United States  
(Baltimore)

Mixed doubles—A. D. Jordan-E. J. Timperley, England

# BASKETBALL

## Intercollegiate

### 1956 N. C. A. A. FINAL

(At Evanston, Ill., March 23)

SAN FRANCISCO (83)				IOWA (71)			
	G.	F.	P.		G.	F.	P.
oldt, lf.....	7	2	16	Cain, lf.....	7	3	17
armer.....	0	0	0	Schoof, rf.....	5	4	14
reaseau, rf.....	3	1	7	Sebolt.....	0	0	0
ussell, c.....	11	4	26	Logan, c.....	5	2	12
elson.....	0	0	0	George.....	0	0	0
erry, lg.....	6	2	14	Scheuerman, lg.....	4	3	11
rown, rg.....	6	4	16	Seaberg, rg.....	5	7	17
xter.....	2	0	4	Martel.....	0	0	0
ush.....	0	0	0	McConnell.....	0	0	0
ayne.....	0	0	0	Hawthorne.....	0	0	0
Total.....	35	13	83	Total.....	26	19	71

Half-time score—San Francisco 38, Iowa 33.

Personal fouls—Boldt 4, Farmer 2, Preaseau 3, Russell 2, Perry 2, Cain 1, Schoof 3, Logan 3, cheuerman 2, Seaberg 1.

Free throws missed—Preaseau, Russell, Cain, cheuerman, Seaberg 3.

### 1955-56 ALL-AMERICA SELECTIONS

(Associated Press poll)

FIRST TEAM—Bill Russell, San Francisco; Robin Freeman, Ohio State; Sihugo Green, Duquesne; Darrell Floyd, Furman; Tom Heinsohn, Holy Cross.

SECOND TEAM—Ron Shavlik, North Carolina State; K. C. Jones, San Francisco; Rod Hundley, West Virginia; Len Rosenbluth, North Carolina; Bill Uhl, Dayton.

THIRD TEAM—Joe Holup, George Washington; Julius McCoy, Michigan State; Bill Ridley, Illinois; Bob Burrow, Kentucky; Willie Naulis, U.C.L.A.

### FINAL 1955-56 COLLEGE RANKINGS

(Associated Press poll)

1, San Francisco; 2, North Carolina State; 3, Dayton; 4, Iowa; 5, Alabama; 6, Louisville; 7, Southern Methodist; 8, U.C.L.A.; 9, Kentucky; 10, Illinois.

## WEIGHT LIFTING

### A. A. U. Championships

(At Philadelphia, June 1-2)

Class	Press	Snatch	C & J	Total
234-lb.—Charles Vinci, York, Pa.....	220	210	260	690
324-lb.—Isaac Berger, York, Pa.....	235	210	275	720
484-lb.—Joe Pitman, Vero Beach, Fla.....	230	240	315	785
654-lb.—Clement Warner, Bethpage, N. Y.....	270	250	315	835
814-lb.—Jim George, Akron, Ohio.....	260	275	340	875
984-lb.—Clyde Emrich, Chicago.....	300	280	375	955
Heavyweight—Paul Anderson, Toccoa, Ga.....	400	334	440	1175
Team—York (Pa.) Barbell Club				

### Miss Leary's Hound Wins

Patricia D. Leary, of Pluckemin, New Jersey, with her Afghan Hound, Ch. Lala took of Estloc, won the Professional Handlers Association's Junior Showmanship Class competition for the Leonard Brumby Sr. Memorial Trophy at the 1956 Westminster Kennel Club Show in New York. Miss Leary also captured the High Scoring Trophy by winning 23 junior showmanship classes in 1955.

### FINAL 1955-56 CONFERENCE STANDINGS

Ivy League			
	W.	L.	W. L.
Dartmouth.....	10	4	7 7
Columbia.....	9	5	7 7
Pennsylvania.....	9	5	3 11
Cornell.....	8	6	3 11
Yale.....			
Princeton.....			
Harvard.....			
Brown.....			

Western			
	W.	L.	W. L.
Iowa.....	13	1	6 8
Illinois.....	11	3	6 8
Ohio State.....	9	5	4 10
Purdue.....	9	5	4 10
Michigan State.....	7	7	1 13
Indiana.....			
Minnesota.....			
Wisconsin.....			
Northwestern.....			

Southwest			
	W.	L.	W. L.
So. Methodist.....	12	0	3 9
Arkansas.....	9	3	3 9
Rice.....	8	4	2 10
Texas.....	5	7	
Texas A. & M.....			
Baylor.....			
Texas Christian.....			

Pacific Coast			
	W.	L.	W. L.
U. C. L. A.....	16	0	5 11
Washington.....	11	5	5 11
California.....	10	6	4 12
Stanford.....	10	6	2 14
So. California.....	9	7	
Oregon.....			
Oregon State.....			
Idaho.....			
Wash. State.....			

Missouri Valley			
	W.	L.	W. L.
Houston.....	9	3	4 8
St. Louis.....	8	4	3 9
Okl. A. & M.....	8	4	3 9
Wichita.....	7	5	
Tulsa.....			
Detroit.....			
Bradley.....			

Big Seven			
	W.	L.	W. L.
Kansas State.....	9	3	6 6
Iowa State.....	8	4	3 9
Missouri.....	8	4	1 11
Colorado.....	7	5	
Kansas.....			
Nebraska.....			
Oklahoma.....			

## OTHER CHAMPIONS

### Intercollegiate

National (New York) Invitation—Louisville  
Southeastern Conference—Alabama  
Southern Conference—West Virginia  
Atlantic Coast Conference—North Carolina State  
Mason-Dixon Conference—Mount St. Mary's  
Mountain States (Skyline)—Utah  
Border Conference—Texas Tech  
Rocky Mountain Conference—Idaho State  
Mid-West Conference—Coe  
Mid-American Conference—Marshall  
National Assn. (N.A.I.A.)—McNeese State, Lake Charles, La.  
National Junior—Kilgore (Texas)  
Central A. A.—Maryland State  
Canadian—Western Ontario

### Amateur Athletic Union

Men—Buchan Bakers, Seattle  
Women—Wayland Flying Queens, Plainview, Tex.

## Professional Basketball

Source: Haskell Cohen, Publicity Director, National Basketball Association.

## NATIONAL BASKETBALL ASSOCIATION

## Final 1955-56 Standing of the Clubs

(Regular season)

## EASTERN DIVISION

Avg. pts.  
per game

	W.	L.	Pct.	Avg. pts. per game
Philadelphia Warriors.....	45	27	.625	103.1
Boston Celtics.....	39	33	.542	106.0
*Syracuse Nationals.....	35	37	.486	96.9
New York Knickerbockers.....	35	37	.486	100.2

\* Beat New York in one-game play-off for third.

## WESTERN DIVISION

Avg. pts.  
per game

	W.	L.	Pct.	Avg. pts. per game
Fort Wayne Pistons.....	37	35	.514	94.4
*Minneapolis Lakers.....	33	39	.458	99.3
St. Louis Hawks.....	33	39	.458	96.6
Rochester Royals.....	31	41	.431	95.8

\* Beat St. Louis in one-game play-off for second.

## TEAM-VS.-TEAM VICTORIES

(Regular Season)

	Philadelphia	Boston	New York	Syracuse	Fort Wayne	Minneapolis	St. Louis	Rochester	Points	
									For	Agts.
Philadelphia.....	—	7	6	9	5	6	6	6	7424	7117
Boston.....	5	—	5	8	4	7	5	5	7632	7585
New York.....	6	7	—	4	4	4	4	6	7212	7242
Syracuse.....	3	4	8	—	5	5	6	4	6976	6975
Fort Wayne.....	4	5	5	4	—	5	7	7	6794	6743
Minneapolis.....	3	2	5	4	7	—	5	7	7148	7212
St. Louis.....	3	4	5	3	5	7	—	6	6953	7059
Rochester.....	3	4	3	5	5	5	6	—	6900	7106

## Leading Scorers

(Regular season)

	Gms.	Gls.	Fis.	Pts.
Bob Pettit, St. Louis.....	72	646	557	1849
Paul Arizin, Philadelphia.....	72	617	507	1741
Neil Johnston, Philadelphia.....	70	499	549	1547
Clyde Lovellette, Minneapolis.....	71	594	338	1526
Adolph Schayes, Syracuse.....	72	465	542	1472
Bill Sharman, Boston.....	72	538	358	1434
Bob Cousy, Boston.....	72	440	476	1356
Ed Macauley, Boston.....	71	420	400	1240
George Yardley, Fort Wayne.....	71	434	365	1233
Larry Foust, Fort Wayne.....	72	367	432	1166
Maurice Stokes, Rochester.....	67	403	319	1125
Carl Braun, New York.....	72	396	320	1112
Jack Twyman, Rochester.....	72	417	204	1038
Joe Craboski, Philadelphia.....	72	397	240	1034
Harry Gallatin, New York.....	72	352	358	1002
Jack George, Philadelphia.....	72	352	296	1000
Charles Share, St. Louis.....	72	315	346	976
Vern Mikkelsen, Minneapolis.....	72	317	328	962
John Kerr, Syracuse.....	72	377	207	961
Jack Coleman, St. Louis.....	75	390	177	957
Slater Martin, Minneapolis.....	72	309	329	947
Ken Sears, New York.....	70	319	258	896

## N. B. A. All-Star Selections

FIRST TEAM—Bob Pettit, St. Louis; Paul Arizin and Neil Johnston, Philadelphia; Bob Cousy and Bill Sharman, Boston

SECOND TEAM—Maurice Stokes, Rochester; Adolph Schayes, Syracuse; Clyde Lovellette and Slater Martin, Minneapolis; Jack George, Philadelphia

## HORSE RACING

## U. S. STAKES WINNERS

Win Value

American Derby—Swoon's Son.....	\$102,601
American Handicap—Swaps.....	57,504
Arlington Classic—Swoon's Son.....	102,000
Arlington Lassie—Leallah.....	56,011
Arlington Futurity—Greek Game.....	84,411
Arlington Handicap—Mr. Gus.....	97,901
Atlantic City Handicap—Blue Sparkler.....	65,004
Belmont Futurity—Bold Ruler.....	91,141
Belmont Stakes—Needles.....	83,604
Blue Grass—Toby B.....	21,201
Brooklyn—Dedicate.....	37,601
California—Porterhouse.....	63,701
Carter—Red Hannigan.....	40,401
Coaching Club American Oaks—Levee.....	41,101
Delaware Handicap—Flower Bowl.....	104,871
Delaware Oaks—Dotted Line.....	40,321
Dwyer—Riley.....	30,401
Flamingo—Needles.....	111,601
Florida Derby—Needles.....	95,201
Garden State Stakes—Barbizon.....	168,431
Gulfstream Park Handicap—Sailor.....	83,301
Hawthorne Gold Cup—Dedicate.....	80,751
Hollywood Gold Cup—Swaps.....	100,001
Hopeful—King Hairan.....	48,401
Jersey—Fabius.....	44,701
John B. Campbell Memorial.....	74,751
Kentucky Derby—Needles.....	123,451
Kentucky Oaks—Princess Turia.....	21,651
Leonard Richards—Ricci Tavi.....	37,401
Massachusetts—Midafternoon.....	38,201
Metropolitan—Midafternoon.....	37,701
Monmouth Handicap—Nashua.....	78,201
Monmouth Oaks—Levee.....	38,501
Preakness—Fabius.....	84,251
Princess Pat—Splendor.....	58,301
San Juan Capistrano—Bobby Brocato.....	68,901
Santa Anita Derby—Terrang.....	111,701
Santa Anita Maturity—Trackmaster.....	79,601
Santa Anita Handicap—Bobby Brocato.....	97,901
Saratoga Special—Nearctic.....	13,501
Starlet—Lucky Mel.....	61,451
Suburban—Nashua.....	55,901
Sunset—Swaps.....	64,401
Travers—Oh Johnny.....	33,201
United Nations—Career Boy.....	65,001
Washington Park Handicap—Swaps.....	85,751
Washington Park Futurity—Greek Game.....	87,001
Widener—Nashua.....	92,601
Wood Memorial—Head Man.....	42,401

## Foreign Races

Epsom Derby (England)—Lavandin  
Grand National (England)—E. S. B.  
Queen's Plate (Canada)—Canadian Champ

## N. B. A. Playoffs

## Eastern Division

Syracuse beat Boston, 2 games to 1.  
Final—Philadelphia beat Syracuse, 3 games to 2.

## Western Division

St. Louis beat Minneapolis, 2 games to 1.  
Final—Fort Wayne beat St. Louis, 3 games to 2.

## Championship Series

\*March 31—Philadelphia 98, Fort Wayne 94.  
April 1—Fort Wayne 84, Philadelphia 83.  
\*April 3—Philadelphia 100, Fort Wayne 96.  
April 5—Philadelphia 107, Fort Wayne 105.  
\*April 7—Philadelphia 99, Fort Wayne 88.  
\* At Philadelphia.

## FINAL STANDING OF THE CLUBS

	Won	Lost	Pct.
Philadelphia Warriors.....	4	1	.80
Fort Wayne Pistons.....	1	4	.20

## West Wins All-Star Game

The West upset the East, 108-94, in the National Basketball Association's annual All-Star game at Rochester, N. Y., on Jan. 24, 1956. Bob Pettit and Verne Mikkelsen paced the victors with 20 and 16 points respectively.



# TRACK AND FIELD A. A. U. Championships

## Senior Outdoor

(At Bakersfield, Calif., June 22-23)

00 meters—Bobby Morrow, Abilene Christian.....	0:10.3
00—Thane Baker, U. S. Air Force.....	0:20.6
00—Tom Courtney, New York A. C.....	0:45.8
00—Arnold Sowell, U. of Pittsburgh.....	1:47.6
500—Jerome Walters, Los Angeles Striders.....	3:48.4
900—Dick Hart, Philadelphia.....	14:47.4
0,000—Max Truex, Los Angeles A. C.....	30:52.0
10 hurdles—Lee Calhoun, No. Carolina College.....	0:13.6
00 hurdles—Charles Pratt, N. Y. Pioneer Club.....	0:22.8
00 hurdles—Glenn Davis, Ohio State.....	0:50.9
000 steeplechase—Horace Ashenfelter, New York A. C.....	9:04.1
000 walk—Henry Laskau, 92d St. Y.M.H.A., New York.....	12:39.0
igh jump—Charles Dumas, Compton College 6 ft. 10 in. Broad Jump—Ernie Shelby, Pierce (Calif.) Jr. College.....	26 ft. 1½ in.
op, step and jump—Willie Hollie, U. S. Army	49 ft. 6 in.
ole vault—Robert Richards, Los Angeles A. C.....	15 ft.
est put—Ken Bantum, Manhattan College.....	59 ft. 1½ in.
iscus—Ron Drummond, Los Angeles A. C.....	180 ft. 3 in.
avelin—Cy Young, Olympic Club, San Francisco.....	247 ft. 11½ in.
ammer—Harold Connolly, Boston A. A.....	205 ft. 10½ in.
6-lb. weight—Robert Backus, New York A. C.....	43 ft.
eam—New York A. C.....	91 1/7 pts.
il—Around—Charles Stevenson, New York A. C.....	7,612 pts.
ecathlon—Rafer Johnson, U.C.L.A.....	7,754 pts.
entathlon—Howard Smith, Los Angeles Striders.....	3,033 pts.
arathon—John Kelley, Boston A. A.....	2:24:52.2
0-yd. relay—East York, Toronto, Track Club (Sam Levenson, Jack Parrington, Bob Harding, Joe Foreman).....	0:41.3
ile relay—N. Y. Pioneer Club (Frank Bowens, John Tucker, Richard Maiocco, Louis Jones).....	3:13.0
½-miles relay—Chicago Track Club (John Lattimore, James Caffey, Ted Wheeler, Phil Coleman).....	7:22.1

## Senior Indoor

(At Squadron A Armory and Madison Square Garden, New York, Feb. 18)

0 yd.—John Haines, Pennsylvania.....	0:06.2
00 yd.—Louis Jones, N. Y. Pioneer Club.....	1:11.0
000 yd.—Arnold Sowell, Pittsburgh.....	2:08.4
ile run—Ron Delany, Villanova.....	4:14.5
iles—Horace Ashenfelter, New York A. C.....	14:09.6
3-yd. hurdles—Lee Calhoun, No. Carolina College.....	0:07.2
ile walk—Henry H. Laskau, 92d Street Y.M.H.A.....	6:44.5
put medley relay (440, 100, 220, 300)—Villanova, (Charles Jenkins, Gene Maliff, George Sydnor, Al Peterson).....	1:52.9
ile relay—N. Y. Pioneer Club (Joe Gold, John Tucker, Richard Maiocco, Reginald Pearman).....	3:20.3
mile relay—Syracuse (Robert Milner, Art Ritchie, Bob Pugsley, Les Vielbig).....	7:37.9
road jump—Rosslyn Range, Los Angeles.....	24 ft. 7½ in.
igh jump—Ernie Shelton, Los Angeles A. C.....	6 ft. 9 in.
ole vault—Tie between Robert Richards, Los Angeles A. C., and Don Bragg, Villanova.....	15 ft. 1 in.
hot-put—W. Parry O'Brien, U. S. Air Force.....	61 ft. 5½ in.
5-lb. weight—Robert Backus, New York A. C.....	63 ft. 10½ in.
eam—N. Y. Pioneer Club.....	28 pts.

## Women's Outdoor

(At Philadelphia, Aug. 18)

50 meters—Isabel Daniels, Tennessee State.....	0:06.4
100—Mae Faggs, Tennessee State.....	0:11.7
200—Mae Faggs.....	0:24.6
80 hurdles—Bertha Diaz, Cuba.....	0:11.2
400 relay—Tennessee State (Martha Hudson, Willa Rudolph, Isabel Daniels, Mae Faggs).....	0:47.1
High jump—Mildred McDaniel, Tuskegee Institute.....	5 ft. 4 in.
Broad jump—Margaret Matthews, Tennessee State.....	19 ft. 4 in.
4-kilo. shot put—Mrs. Earline Brown, Compton, Calif.....	45 ft.
Discus—Pamela Kurrell, San Francisco.....	140 ft. 11 in.
Javelin—Karen Anderson, Lansdowne, Pa.....	159 ft. 1 in.
Baseball throw—Pamela Kurrell.....	269 ft. 5½ in.
Team—Tennessee State.....	95 pts.

## Women's Indoor

(At Washington, D. C., Jan. 21)

50 yds.—Isabel Daniels, Tennessee State.....	0:06.2
100—Isabel Daniels.....	0:11.1
220—Mae Faggs, Tennessee State.....	0:26.8
70 hurdles—Constance Darnowski, German-American A. C., New York.....	0:09.7
440 relay—Tennessee State (Ella Turner, Lucinda Williams, Isabel Daniels, Mae Faggs).....	0:52.5
440 medley relay—Tennessee State (Ella Turner, Margaret Matthews, Lucinda Williams, Charlesetta Reddick).....	0:53.0
High Jump—Mildred McDaniel, Tuskegee Institute.....	5 ft. 4 in.
Standing broad jump—Mrs. Nancy Phillips, German-American A. C., New York.....	8 ft. 2½ in.
4-kilo. shot put—Mrs. Adele Tischler, Czechoslovakia.....	44 ft. 4¼ in.
Basketball throw—Catherine Walsh, Queens Mercurettes, New York.....	101 ft. 6 in.
Team—Tennessee State.....	34 pts.

## NATIONAL COLLEGIATE

(At Berkeley, Calif., June 15-16)

100 meters—Bobby Morrow, Abilene Christian.....	0:10.4
200—Bobby Morrow.....	0:20.6
400—J. W. Mashburn, Oklahoma A. & M.....	0:46.4
800—Arnold Sowell, Pittsburgh.....	1:46.7
1,500—Ron Delany, Villanova.....	3:47.3
5,000—Bill Dellinger, Oregon.....	14:48.5
10,000—Selwyn Jones, Michigan State.....	31:15.3
110 hurdles—Lee Calhoun, North Carolina College.....	0:13.7
400 hurdles—Aubrey Lewis, Notre Dame.....	0:51.0
3,000 steeplechase—Henry Kennedy, Michigan State.....	9:16.5
Broad jump—Greg Bell, Indiana.....	25 ft. 9¼ in.
High jump—Tie among Phil Reavis, Villanova; Bob Lang, Missouri; Nick Dyer, U. C. L. A.....	6 ft. 6¼ in.
Discus—Ron Drummond, U. C. L. A.....	173 ft. ½ in.
Hammer—Bill McWilliams, Bowdoin.....	195 ft. 3 in.
Hop, step and jump—Bill Sharpe, West Chester (Pa.) Teachers.....	50 ft. 4¾ in.
Javelin—Phil Conley, California Tech.....	239 ft. 11 in.
Pole vault—Bob Gutowski, Occidental, and Jim Graham, Oklahoma A. & M. (tie).....	14 ft. 8 in.
Shot-put—Ken Bantum, Manhattan.....	60 ft. ½ in.
Team—U. C. L. A.....	55 7/10 pts.

## INTERCOLLEGIATE A. A. A. A.

## OUTDOOR

(At Randall's Island, New York, May 25-26)

100 yd.—Herb Carper, Pittsburgh.....	0:09.4
220—John Haines, Pennsylvania.....	0:20.5
440—John Haines.....	0:47.3
880—Arnold Sowell, Pittsburgh.....	1:51.1
1 mile—Ron Delany, Villanova.....	4:14.4
2 miles—Alex Breckenridge, Villanova.....	9:20.1
120 hurdles—Rod Perry, Penn State.....	0:14.3
220 hurdles—Vic Gavin, La Salle.....	0:23.1
1 mile relay—Villanova (Gene Maliff, Al Peterson, Roland Simpson, Charles Jenkins).....	3:14.9
Broad jump—Len Moore, Manhattan.....	23 ft. 8½ in.
High jump—Phil Reavis, Villanova.....	6 ft. 6½ in.
Discus—Art Siler, Harvard.....	160 ft. 5½ in.
Hammer—Albert Hall, Cornell, and Bill McWilliams, Bowdoin (tie).....	196 ft. 2½ in.
Javelin—Bill Alley, Syracuse.....	206 ft. 11 in.
Pole vault—Don Bragg, Villanova.....	15 ft.
Shot-put—Ken Bantum, Manhattan.....	56 ft. 8 in.
Team—Manhattan.....	42½ pts.

## BOSTON MARATHON 1956

(Sixtieth running)

## Leading Finishers

	h. m. s.
1—Antti Viskari, Finland.....	*2:14:14
2—Johnny Kelley, Boston.....	2:14:33
3—Eino Oksanen, Finland.....	2:17:56
4—Nick Costes, Boston A. A.....	2:18:01
5—Dean Thackwray, Boston A. A.....	2:20:24
6—Ted Corbitt, N. Y. Pioneer Club.....	2:28:06
7—Gordon Dickson, New York A. C.....	2:28:45
8—Joe Tyler, San Diego, Calif.....	2:29:17
9—Bob Cons, Los Angeles.....	2:29:24
10—Fred Wilt, New York A. C.....	2:29:27
11—Tom Ryan, Culver City A. C.....	2:29:35
12—Jim Daley, Jr., Westford, Mass.....	2:31:25
13—Browning Ross, Penn A. C.....	2:31:38
14—Aldo Scandurra, Millrose A. A.....	2:33:34
15—John LaFerty, Boston A. A.....	2:33:57
16—Louis Seibert, Culver City A. C.....	2:35:16
17—Rene Doiron, Gardner, Mass.....	2:36:35
18—Michael Allen, Ft. Lewis, Wash.....	2:36:40
19—Luis Torres, N. Y. Pioneer Club.....	2:36:47
20—Alfred Confalone, Wakefield, Mass.....	2:37:00

\* Record for the 26-mile-385-yard race.

## INDOOR MILE WINNERS, 1956

Boston K. of C.—Ron Delany, Villanova.....	4:11.2
Philadelphia Inquirer—Ron Delany.....	4:16.9
Washington Star (Jr. Chamber of Commerce)—George King, N. Y. U.....	4:11.3
Boston A. A. (Hunter)—Ron Delany.....	4:06.3
Metropolitan College—Ike Matza, N. Y. U.....	4:15.8
Millrose (Wanamaker)—Ron Delany.....	4:09.5
New York A. C. (Baxter)—Ron Delany.....	4:14.0
National Interscholastic—Don Luisi, Rockland, Mass.....	4:23.3
National A. A. U.—Ron Delany.....	4:14.5
Atlantic Coast—Jim Beatty, North Carolina.....	4:23.3
I. C. 4-A—Ron Delany.....	4:11.4
Big Ten—Ted Wheeler, Iowa.....	4:12.5
Big Seven—Allen Frame, Kansas.....	4:16.9
Central Collegiate—Bill Squires, Notre Dame.....	4:14.9
Heptagonal—Doug Brew, Dartmouth.....	4:19.3
New York K. of C. (Columbian)—Wes Santee, Quantico Marines.....	4:13.8
New York K. of C. (special)—Ron Delany.....	4:11.8
5th Rgt., Baltimore—Ike Matza.....	4:22.5
Pioneer Club (Pegler)—George King.....	4:11.9
Milwaukee Journal (1st section)—Billy Tidwell, Emporia Teachers.....	4:10.9
Milwaukee Journal (2d section)—Wes Santee.....	4:10.5
Cleveland K. of C.—Ted Wheeler.....	4:13.0
Cleveland K. of C. (special)—Wes Santee.....	4:06.9
Hamilton (Ont.) Highlanders—George King.....	4:18.0
Canadian Championship—Fred Dwyer, New York A. C.....	4:11.1
Chicago Relays (Bankers)—Ted Wheeler.....	4:07.5

## INDOOR

(At Squadron A Armory and Madison Square Garden, New York, Feb. 25)

60 yd.—John Haines, Pennsylvania.....	0:06.1
600—Charles Jenkins, Villanova.....	1:11.9
1,000—Arnold Sowell, Pittsburgh.....	2:13.5
1 mile—Ron Delany, Villanova.....	4:11.4
2 miles—George King, New York U.....	9:07.0
60 hurdles—Rod Perry, Penn State.....	0:07.3
1 mile relay—Villanova (Gene Maliff, Roland Simpson, Warner Heitmann, Charles Jenkins).....	3:19.6
2-mile relay—Pittsburgh (James Moore, Wendell Harford, Perry Jones, Arnold Sowell).....	7:40.0
Broad jump—Len Moore, Manhattan.....	23 ft. 5½ in.
High jump—Phil Reavis, Villanova.....	6 ft. 5 in.
Pole vault—Don Bragg, Villanova.....	15 ft. 2 in.
Shot-put—Ken Bantum, Manhattan.....	55 ft. 6¾ in.
35-lb. weight—Albert Hall, Cornell.....	62 ft. 8½ in.
Team—Manhattan.....	36 pts.

## SOCCER

## United States

Source: Jeffrey Lee Syndicate, 10 Overlook Terrace, New York 33, N. Y.

National Challenge Cup—Harmarville (Pa.) Hurricanes.....
National Amateur Cup—Kutis, St. Louis.....
American League—Uhrik Truckers, Philadelphia.....
Lewis Cup—Not held.....
National Junior Cup—St. Engelbert, St. Louis.....
Eastern Challenge Cup—New York Hungarians.....
Eastern District League—Sons of Malta, New York.....
German-American League—German Hungarians, New York.....
Metropolitan League—Coyan, New York.....
National League—Brooklyn Italians, New York.....
Long Island League—Lindenhurst, N. Y.....
Keystone (Pa.) League—Heidelberg.....
Boston and District—Boston Celtics.....
Philadelphia League—Little Club.....
New Jersey State Cup—Maritimo, Newark.....
New Jersey State League—Maritimo, Newark.....
Ohio State Cup—Liederkrantz, Mansfield.....
San Francisco League—Mercury.....

## British

Source: Jim Kelly, 2889 Bainbridge Ave., New York 58, N. Y.

International—England, Scotland, Ireland, Wales (tie).....
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## ENGLISH

League (Division I)—Manchester United.....
League (Division II)—Sheffield Wednesday.....
League (Division III, South)—Leyton Orient.....
League (Division III, North)—Grimby Town.....
Cup—Manchester City.....

## SCOTTISH

League (Division A)—Glasgow Rangers.....
League (Division B)—Queens Park.....
Cup—Hearts of Midlothian.....

## WELSH

League (Division I, South)—Pembroke Borough.....
League (Division I, North)—Flint Town United.....
Cup—Cardiff City.....

## IRISH

League—Linfield.....
Cup—Distillery.....

## Hainsworth Holds Goalie Marks

George Hainsworth of the Montreal Canadiens set the National Hockey League record for most shutouts for a goalie by blanking the opposition 22 times in 44 games in 1928-29. That season Hainsworth allowed 43 goals, another circuit mark.

## SWIMMING

## National A. A. U. Championships

## Men's Indoor

(At New Haven, April 5-7)

100-yd. free—Rex Aubrey, New Haven S. C.	0:49.1
200-yd. free—Richard Hanley, Evanston, Ill.	2:05.9
400-yd. free—George Breen, Buffalo, N. Y.	4:30.1
500 meter free—George Breen	18:20.2
100-yd. back—Albert Wiggins, Pittsburgh	0:57.0
200-yd. back—Frank McKinney, Indianapolis A. C.	2:21.7
300-yd. breast—Donald Kutyna, Army	1:03.0
200-yd. breast—Richard Fadgen, North Carolina A. C.	2:37.1
100-yd. butterfly—Albert Wiggins	0:54.5
200-yd. butterfly—Jiro Nagasawa, Japan	2:19.4
300-yd. medley—Tim Jecko, New Haven S. C.	4:46.5
400-yd. free style relay—New Haven S. C. (Daniel Cornwell, Dave Armstrong, Hendrik Gideonse, Rex Aubrey)	3:22.2
500-yd. medley relay—North Carolina A. C. (William Sonner, Richard Fadgen, Jack Nelson, David McIntyre)	3:46.0
1-meter dive—Lt. Robert Clotworthy, West Point, N. Y.	531.2
3-meter dive—Donald Harper, Columbus, Ohio	542.6 pts.
Team—North Carolina A. C.	72 pts.

## Women's Indoor

(At Daytona Beach, Fla., April 5-7)

100-yd. free—Wanda Werner, Walter Reed S. C., Washington, D. C.	0:58.6
200-yd. free—Dougie Gray, Walter Reed S. C.	2:45.4
300-yd. free—Dougie Gray	5:55.8
400-yd. back—Carin Cone, Ridgewood, N. J.	1:07.2
500-yd. back—Carin Cone	2:26.4
600-yd. breast—Mary Jane Sears, Walter Reed S. C.	1:12.2
700-yd. breast—Mary Jane Sears	3:22.1
800-yd. butterfly—Shelley Mann, Walter Reed S. C.	1:04.1
900-yd. butterfly—Shelley Mann	2:26.3
1000-yd. medley—Sylvia Ruuska, Berkeley (Calif.) Y.M.C.A.	5:14.9
1100-yd. medley relay—Walter Reed S. C. (Shelley Mann, Mary Jane Sears, Mrs. Betty Mullen Brey, Wanda Werner)	4:27.4
1200-yd. free-style relay—Lafayette (Ind.) A. C. (Lucy Crocker, Helen Hughes, Barbara Love, Joan Rosazza)	3:56.8
1-meter dive—Ann Cooper, Los Angeles A. C.	481.35 pts.
3-meter dive—Barbara Gilders, Detroit A. C.	416.85 pts.
Team—Walter Reed S. C.	110 pts.

## NATIONAL COLLEGIATE

(At New Haven, Conn., March 29-31)

100-yd. free—Rex Aubrey, Yale, and Robin Moore, Stanford (tie)	0:22.1
200-yd. free—Al Kuhn, Northwestern	0:49.3
300-yd. free—Bill Woolsey, Indiana	2:04.7
400-yd. free—Bill Woolsey	4:31.1
500-meter free—George Breen, Cortland Teachers	18:05.9
100-yd. back—Lincoln Hurring, Iowa	0:58.1
200-yd. back—Lincoln Hurring	2:07.5
300-yd. breast—Richard Fadgen, N. C. State	2:23.1
400-yd. butterfly—Richard Fadgen	2:16.3
500-yd. medley—Albert Wiggins, Ohio State	2:07.5
600-yd. medley relay—Yale (Bill Clinton, Dan Cornwell, Rex Aubrey)	2:46.3
700-yd. free-style relay—Yale (Cornwell, Joe Robinson, Dave Armstrong, Hendrik Gideonse)	3:23.1
1-meter dive—Frank Fraunfelder, Ohio State	514.10 pts.
3-meter dive—Don Harper, Ohio State	505.3 pts.
Team—Ohio State	68 pts.

## Men's Outdoor

(At Cuyahoga Falls, Ohio, July 27-29)

100 m. free—Dick Hanley, Ann Arbor, Mich.	0:56.3
200 m. free—Bill Woolsey, Hawaii	2:06.6
400 m. free—George Breen, Buffalo A. C.	4:37.6
1,500 m. free—George Breen	18:27.6
100 m. back—Yoshi Oyakawa, Coca Cola S. C., Cincinnati	1:05.9
200 m. back—Frank McKinney, Indianapolis A. C.	2:24.5
300 m. butterfly—Albert Wiggins, Pittsburgh	1:04.2
400 m. butterfly—Bill Yorzyk, New Haven S. C.	2:24.3
500 m. breast—Bob Hughes, Club del Mar, Santa Monica, Calif.	1:11.2
600 m. breast—Richard Fadgen, North Carolina A. C.	2:45.8
700 m. medley—Bill Yorzyk	5:19.0
800 m. medley relay—New Haven S. C. (Jerry Dolbey, Deed Hardin, Bill Yorzyk, David Armstrong)	4:26.5
900 m. free style relay—New Haven S. C. (David Armstrong, Roger Anderson, Tim Jecko, Bill Yorzyk)	8:53.7
1000 m. dive—Robert Clotworthy, New York A. C.	510.15 pts.
1100 Platform dive—Gary Tobian, Los Angeles A. C.	511.45 pts.
1200 Team—New Haven S. C.	65 pts.

## Women's Outdoor

(At Houston and Tyler, Texas, July 4-8)

1100-yd. free—Wanda Werner, Walter Reed S. C., Washington, D. C.	1:06.3
1200-yd. free—Mary Jane Shriver, Los Angeles A. C.	5:13.8
1300-yd. free—Sylvia Ruuska, Berkeley, Calif., Y.M.C.A.	10:54.5
1400-yd. 1,500-meter free—Carolyn Green, Ft. Lauderdale S. A., Fla.	21:30.2
1500-yd. back—Carin Cone, Ridgewood, N. J.	1:14.5
1600-yd. back—Carin Cone	2:43.8
1700-yd. butterfly—Shelley Mann, Walter Reed S. C.	1:11.8
1800-yd. butterfly—Shelley Mann	2:44.4
1900-yd. breast—Mary Jane Sears, Walter Reed S. C.	1:22.7
2000-yd. breast—Mary Jane Sears	2:59.0
2100-yd. medley—Shelley Mann	5:52.5
2200-yd. medley relay—Walter Reed S. C. (Shelley Mann, Mary Jane Sears, Mrs. Betty Mullen Brey, Wanda Werner)	5:05.8
2300-yd. free-style relay—Walter Reed S. C. (Shelley Mann, Dougie Gray, Marie Gillett, Wanda Werner)	10:09.8
2400 1-meter dive—Mrs. Patricia McCormick, Los Angeles A. C.	481.30 pts.
2500 3-meter dive—Mrs. Patricia McCormick	446.60 pts.
2600 Platform dive—Mrs. Patricia McCormick	261.00 pts.
2700 Team—Walter Reed S. C.	104 pts.

## EASTERN INTERCOLLEGIATE LEAGUE

(At Ithaca, N. Y., March 15-17)

500-yd. free—Rex Aubrey, Yale	0:22.3
600-yd. free—Rex Aubrey	0:49.5
700-yd. free—James Jorgenson, Harvard	2:06.9
800-yd. free—George Breen, Cortland Teachers	4:32.8
900-yd. 1,500-meter free—George Breen	17:44.5
1000-yd. back—Charles Krepp, North Carolina	0:58.8
1100-yd. back—Charles Krepp	2:07.0
1200-yd. breast—Richard Fadgen, N. C. State	2:19.9
1300-yd. butterfly—Richard Fadgen	2:13.2
1400-yd. medley—Charles Krepp	2:09.7
1500-yd. medley relay—Yale (Bill Clinton, Dan Cornwell, Dave Armstrong)	2:48.2
1600-yd. free-style relay—Harvard (H. Chouteau Dyer, Pete Macky, Ron Lind, James Jorgenson)	3:26.1
1700 1-meter dive—Ronald Keenhold, Lehigh	412.35 pts.
1800 3-meter dive—Frank Knight, Army	410.25 pts.



# INTERCOLLEGIATE CONFERENCE TEAM CHAMPIONS

## National Collegiate

Source: Wayne Duke, Assistant to Director, N.C.A.A.

Baseball—Minnesota  
Basketball—San Francisco  
Boxing—Wisconsin  
Fencing—Illinois  
Golf—Houston  
Gymnastics—Illinois  
Ice Hockey—Michigan  
Skiing—Denver  
Swimming—Ohio State  
Tennis—U.C.L.A.  
Track and Field—U.C.L.A.  
Wrestling—Oklahoma A. & M.

(For N.C.A. individual champions see Index.)

## EASTERN COLLEGE CONFERENCE

Source: George L. Shiebler, Assistant Commissioner, E.C.A.C.

Eastern Baseball League—Yale  
Ivy Basketball League—Dartmouth  
Intercollegiate Fencing Association—Three Weapon: Navy.  
Foil: Cornell. Epee: Navy. Saber: C. C. N. Y.  
Eastern Golf Association—Yale.  
Eastern Gymnastic League—Army  
Ivy Hockey League—Harvard  
Intercollegiate Rowing Association—Varsity: Cornell. Junior Varsity: Washington. Freshman: Syracuse.  
Eastern Association of Rowing Colleges—Varsity: Cornell. Junior Varsity: Cornell. Freshman: Navy. Lightweight varsity: Princeton. Lightweight junior varsity: Cornell. Lightweight freshman: Princeton.  
Eastern Swimming League—Yale  
Eastern Tennis Association—Harvard  
I. C. A. A. A. A. track and field (indoor and outdoor)—Manhattan.  
Heptagonal Games Association, track and field (indoor and outdoor)—Harvard  
Metropolitan Association, track and field (indoor and outdoor)—Manhattan  
Middle Atlantic Track and Field Association—LaSalle  
Eastern Wrestling Association—Pittsburgh

## PACIFIC COAST

Baseball—Washington State  
Basketball—U.C.L.A.  
Golf—Stanford (So. Div.); Oregon (No. Div.)  
Rowing—Washington  
Swimming—Stanford (So. Div.); Washington (No. Div.)  
Tennis—U.C.L.A. (So. Div.); Washington (No. Div.)  
Track—U.C.L.A.  
Water Polo—California and So. California (So. Div.)

## BIG TEN

Baseball—Minnesota  
Basketball—Iowa  
Fencing—Illinois  
Golf—Purdue  
Gymnastics—Illinois  
Swimming—Ohio State  
Tennis—Michigan  
Track (indoor and outdoor)—Michigan  
Wrestling—Michigan

## ATLANTIC COAST

Baseball—Duke  
Basketball—North Carolina State  
Golf—North Carolina  
Lacrosse—Maryland  
Swimming—North Carolina and North Carolina State  
Tennis—North Carolina  
Track (indoor and outdoor)—Maryland  
Wrestling—Maryland

## SOUTHWEST

Baseball—Texas Christian  
Basketball—Southern Methodist  
Fencing—Rice  
Golf—Southern Methodist  
Swimming—Texas A. & M.  
Tennis—Texas  
Track—Texas

## SOUTHERN

Baseball—George Washington  
Basketball—West Virginia  
Golf—V.P.I.  
Swimming—V.M.I.  
Tennis—George Washington  
Track (indoor and outdoor)—V.P.I.  
Wrestling—V.P.I.

## SOUTHEASTERN

Baseball—Florida  
Basketball—Alabama  
Golf—Florida  
Swimming—Florida  
Tennis—Tulane

## MISSOURI VALLEY

Baseball—Bradley  
Basketball—Houston  
Golf—Houston  
Tennis—Houston  
Track—Oklahoma A. & M.

## BIG SEVEN

Baseball—Oklahoma  
Basketball—Kansas State  
Golf—Oklahoma  
Swimming—Oklahoma  
Tennis—Colorado  
Track (indoor and outdoor)—Kansas  
Wrestling—Oklahoma

## N. A. I. A.

Basketball—McNeece State  
Golf—Lamar State  
Tennis—Lamar State  
Track—Occidental

## NATIONAL JUNIOR COLLEGE

Basketball—Kilgore, Texas  
Track—Victoria, Texas

## 1956 OLYMPIC CHAMPIONS

## Winter Games

(At Cortina d'Ampezzo, Italy, Jan. 26-Feb. 5)

## Skiing

Special slalom—Anton (Toni) Sailer, Austria (2 runs).....	3:14.7
Giant Slalom—Anton Sailer.....	3:00.1
Downhill—Anton Sailer.....	2:52.2
5-km. (9 mi. 564 yd.) race—Hallgeir Brenden, Norway.....	49:39.0
10-km. (18 mi. 1,128 yd.) race—Veikko Hakulin, Finland.....	1:44:06.0
30-km. (31 miles) race—Sixten Jernberg, Sweden.....	2:50:27.0
Jumping—Antti Hyvärinen, Finland.....	234.5 pts.
Nordic combined (jumping and 15-km. race)—Sverre Stenersen, Norway.....	455 pts.
0-km. (25 mi.) relay—U.S.S.R. (Fyodor Terentiev, Pavel Kochin, Nicolai Anikin, Vladimir Kuzin)...	2:15:30.0

## Women

Special slalom—Renee Colliard, Switzerland.....	1:52.3
Giant slalom—Ossi Reichert, Germany.....	1:56.5
Downhill—Madeleine Berthod, Switzerland.....	1:40.7
5-km. (6 mi. 376 yd.) race—Lyubov Kozyreva, U.S.S.R.....	38:11.0
5-km. (9 mi. 564 yd.) relay—Finland (Sirka Polkunen, Mirja Hietamies, Siri Rantanen).....	1:09.1

## Figure Skating

Men—Hayes Alan Jenkins, United States (Colorado Springs).....	166.40 pts.
Women—Tenley Albright, United States (Newton Center, Mass.).....	169.60 pts.
Pairs—Elisabeth Schwarz-Kurt Oppelt, Austria...	11.31 pts.

## Speed Skating

100 meters—Yevgeni Grishin, U.S.S.R.....	0:40.2
500 meters—Yevgeni Grishin and Yuri Mikhailov, U.S.S.R. (tie).....	2:08.6
1,000 meters—Boris Shilkov, U.S.S.R.....	7:48.7
5,000 meters—Sigge Ericsson, Sweden.....	16:35.9

## Bobsledding

2-man—Lamberto Dalla Costa and Giacomo Conti, Italy No. 1 (run times—1:22, 1:22.45, 1:22.95, 1:22.74).....	5:30.14
2-man—Franz Kapus, driver; G. Diener, R. Alt, H. Angst, Switzerland No. 1 (run times—1:18, 1:17.19, 1:17.09, 1:18.16).....	5:10.44

## Ice Hockey

## FINAL ROUND-ROBIN STANDING

	W.	L.	T.	Pts.	Goals For	Goals Agst.
U.S.S.R.....	5	0	0	10	25	5
United States.....	4	1	0	8	26	12
Canada.....	3	2	0	6	23	11
Sweden.....	1	3	1	3	10	17
Czechoslovakia.....	1	4	0	2	20	30
Germany.....	0	4	1	1	6	35

## Unofficial Team Scores

Based on 10 points for each first place, 5 for second, for third, 3 for fourth, 2 for fifth and 1 for sixth (gold medals won in parentheses).

	Pts.		Pts.
U.S.S.R. (6).....	121	Canada.....	16
Austria (4).....	78½	France.....	10
Finland (3).....	66	The Netherlands.....	7
Sweden (2).....	62	Poland.....	6
Switzerland (3).....	55½	Japan.....	5
United States (2).....	54	Czechoslovakia.....	5
Norway (2).....	47	Hungary.....	4
Italy (1).....	31½	Great Britain.....	4
Germany (1).....	24	Spain.....	3

## Equestrian Competition

(At Stockholm, Sweden, June 10-17)

Three-day event (individual)—Petrus Kastenman, Sweden.....	66.53 pts.
Three-day event (team)—Great Britain (Frank Weldon, Bertie Hill, Laurence Rook).....	355.48 pts.
Dressage (individual)—Henri St. Cyr, Sweden.....	860 pts.
Dressage (team)—Sweden (St. Cyr, Genhall Persson, Gosta Boltenstern).....	2,475 pts.
Jumping (individual)—Hans Winkler, Germany.....	4 faults
Jumping (team)—Germany (Alfons Luetke-Westhues, Winkler, Fritz Thiedemann).....	40 faults

## FIGURE SKATING

## 1956 World Championships

(At Garmisch-Partenkirchen, W. Germany, Feb. 16-19)

Men—Alan Hayes Jenkins, United States	
Women—Carol Heiss, United States	
Pairs—Sissy Schwarz-Kurt Oppelt, Austria	
Dance—Pamela Weight-Paul Thomas, Great Britain	

## European

(At Paris, Jan. 19-21)

Men—Alain Giletti, France	
Women—Ingrid Wendt, Austria	
Pairs—Sissy Schwarz-Kurt Oppelt, Austria	
Dance—Pamela Weight-Paul Thomas, Great Britain	

## 1956 U. S. Championships

(At Philadelphia, March 14-17)

Men—Hayes Alan Jenkins, Colorado Springs, Colo.	
Women—Tenley Albright, Newton Center, Mass.	
Pairs—Carole Ann Armaca-Robin Geiner, Berkeley, Calif.	
Gold medalist—Joan Zamboni-Roland Junso, Paramount, Calif.	
Silver dance—Aileen Kahre-Charles Phillip, Jr., Berkeley, Calif.	
Men's junior—Robert Brewer, Pasadena, Calif.	
Women's junior—Joan Schenke, Tacoma, Wash.	
Junior pairs—Nancy Rouillard-Ronald Ludington, Boston	
Men's novice—Bob Hubbard, Sacramento, Calif.	
Women's novice—Barbara Roles, Pasadena, Calif.	

## Canadian

(At Galt, Ont., March 22-24)

Men—Charles Snelling, Toronto	
Women—Carol Pachi, Ottawa	
Pairs—Barbara Wagner-Robert Paul, Toronto	
Dance—Lindis and Jeffery Johnston, London, Ont.	

## VOLLEYBALL CHAMPIONS

Source: Dr. Harold T. Friermood, United States Volleyball Association.

## World

(At Paris, France, Aug. 30-Sept. 12)

Men—Czechoslovakia	
Women—Russia	

## U. S. Volleyball Assn.

(At Seattle, Wash., May 9-12)

Open—Hollywood (Calif.) Y.M.C.A. Stars	
Y.M.C.A. Senior—Hollywood (Calif.) Stars	
Y.M.C.A. Masters Open—Embarcadero, San Francisco	
Intercollegiate—U. C. L. A.	
Women—Santa Monica (Calif.) Mariners	
Armed Forces—Hamilton (Calif.) A. F. B.	

## Others

A. A. U.—Texas Central Y.M.C.A., Houston	
A. A. U. Women—La Rose Houstonettes, Houston, Texas	
National Jewish Welfare Board—Jewish Community Center, Lynn, Mass.	
American Turners—Monessen (Pa.) Turners	

## ICE (SPEED) SKATING

## World Championships

(At Oslo, Norway, Feb. 11-12)

All-around—Oleg Goncharenko, U.S.S.R.....	188.255 pts.
500 meters—Jurij Michailov, U.S.S.R.....	0:41.9
1,500 meters—Boris Schilkov, U.S.S.R.....	2:11.6
5,000 meters—Oleg Goncharenko.....	8:07.7
10,000 meters—Torstein Seiersten, Norway.....	16:43.3

## World—Women

(At Kvarnsveden, Sweden, Feb. 4-5)

All-around—Sofia Kondakova, U.S.S.R.....	207.484 pts.
500 meters—Sofia Kondakova.....	0:47.9
1,000 meters—Sofia Kondakova.....	1:40.2
1,500 meters—Sofia Kondakova.....	2:38.0
3,000 meters—Rimma Zhukova, U.S.S.R.....	5:32.7

## European

(At Helsinki, Finland, Feb. 25-26)

All-around—Evgenij Grischin, U.S.S.R.....	190.692 pts.
500 meters—Evgenij Grischin.....	0:42.4
1,500 meters—Jurij Michailov, U.S.S.R.....	2:13.9
5,000 meters—Knut Johannesen, Norway.....	8:12.5
10,000 meters—Knut Johannesen.....	16:50.1

## North American Outdoor

(At West Allis, Wis., Feb. 4-5)

220 yd.—Dick Widmark, Chicago.....	0:19.3
440 yd.—Phil Elliot, Chicago.....	0:38.0
880 yd.—Phil Elliot.....	1:22.3
1/4-mile—Ken Bartholomew, Minneapolis.....	2:29.5
1/2-mile—Ken Bartholomew.....	3:05.1
2 miles—Ken Bartholomew.....	6:08.4
5 miles—Jim Campbell, Chicago.....	15:39.5
Champion—Ken Bartholomew.....	21 pts.

## WOMEN

220 yd.—Pat Gibson, Madison, Wis.....	0:21.2
440 yd.—Pat Gibson.....	0:43.1
880 yd.—Pat Gibson.....	1:37.5
1/4-mile—Pat Gibson.....	2:24.3
1/2-mile—Pat Gibson.....	3:09.5
Champion—Pat Gibson.....	25 pts.

## BOBSLEDDING

## North American

(At Lake Placid, N. Y.)

Two-man—Stan Benham-Pat Martin, Sno Birds of Lake Placid (N. Y.) Club. Four-heat time.....	5:14.73
Four-man—Sno Birds of Lake Placid Club (Stan Benham, Pat Martin, Chuck Pandolph, John Helmer).....	4:44.38

## National A. A. U.

Two-man (Monahan Trophy)—Stan Benham-Pat Martin, Sno Birds of Lake Placid Club.....	5:03.86
Four-man (Fiske Trophy)—Sno Birds of Lake Placid Club (Benham, Martin, Pandolph, Helmer).....	4:47.95

## Adirondack A. A. U.

Two-man (J. Hubert Stevens Trophy)—Stan Benham-Pat Martin, Sno Birds of Lake Placid Club.....	5:08.08
Four-man (Bettie Trophy)—Sno Birds of Lake Placid Club (Benham, Martin, Pandolph, James Sheffield).....	4:58.16

## Skeleton

(At St. Moritz, Switzerland)

Heaton Gold Cup—D. W. Connor, Montreal
Curzon Cup—D. W. Connor

## North American Indoor

(At Lake Placid, N. Y., Feb. 25-26)

440 yd.—Kenneth LeBel, Lake Placid, N. Y.....	0:42.2
880 yd.—Jay Hasbrouck, Brooklyn, N. Y.....	1:29.2
1/4-mile—Kenneth LeBel.....	2:14.3
1/2-mile—Arnold Uhrlass Jr., New York.....	3:15.5
2 miles—Kenneth LeBel.....	6:45.1
Champion—Kenneth LeBel.....	14 pts.

## WOMEN

440 yd.—Pat Underhill, Edmonton, Alta.....	0:47.1
880 yd.—Pat Underhill.....	1:40.3
1/2-mile—Pat Underhill.....	3:37.7
Champion—Pat Underhill.....	20 pts.

## United States Outdoor

(At St. Paul, Minn., Jan. 28-29)

220 yd.—Dick Wellbank, Chicago.....	0:19.7
440 yd.—Dick Wellbank.....	0:37.0
880 yd.—Ken Bartholomew, Minneapolis.....	1:17.2
1/4-mile—Dick Wellbank.....	2:27.8
1/2-mile—Ron Berg, Great Lakes, Ill.....	3:13.1
2 miles—Ken Bartholomew.....	6:04.8
5 miles—Ken Bartholomew.....	16:03.7
Champion—Ken Bartholomew.....	23 pts.

## WOMEN

220 yd.—Pat Gibson, Madison, Wis.....	0:22.2
440 yd.—Pat Gibson.....	0:41.1
880 yd.—Pat Gibson.....	1:37.1
1/4-mile—Pat Gibson.....	2:27.8
1/2-mile—Pat Gibson.....	3:24.9
Champion—Pat Gibson.....	25 pts.

## United States Indoor

(At Flushing Meadow, N. Y., April 7-8)

440 yd.—Kenneth LeBel, Lake Placid, N. Y.....	0:41.1
880 yd.—William Disney, Pasadena, Calif.....	1:26.9
1/4-mile—Kenneth LeBel.....	2:14.1
1/2-mile—William Disney.....	3:09.4
2 miles—Kenneth LeBel.....	6:27.9
Champion—Kenneth LeBel.....	15 pts.

## WOMEN

440 yd.—Joan Russel, Brooklyn, N. Y.....	0:47.1
880 yd.—Marion Finch, Ozone Park, N. Y.....	1:39.1
1/4-mile—Joan Russel.....	2:35.1
1/2-mile—Marion Finch.....	3:28.1
Champion—Marion Finch.....	14 pts.

## Middle Atlantic

(At Newburgh, N. Y., Jan. 8)

Men—Jay Hasbrouck, Newburgh, N. Y.....	25 pts.
Women—Gwen Finley, Newburgh, N. Y.....	11 pts.

## CURLING

Gordon International Medal Competition—Grand National Curling Club of America, 364 pts; Canadian Branch of the Royal Caledonian Curling Club, 344 pts (at Utica, N. Y. March 2-3)
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## Champions

Source: Glenn Harris, Editor, Curling News, Superior, Wis.

Midwest U.S.—Portage, Wis. (Keith Lauterbach, skip; Dince O'Leary, Gib Jones, Jack Pope)
Women's U.S.—Chicago Heathers (Mrs. Ernest Wentche; skip; Mrs. Robert Wilson, Mrs. F. G. Von Brauchitsch, Mrs. John Coates)
Canadian—Manitoba (Winnipeg Fort Rouge Club—Bill Walsh, skip; Cy White, Allan Langlois, Andy McWilliams)



## SKIING

Source: Harold A. Grinden, Chairman, The National Ski Hall of Fame, Ishpeming, Mich.

## U. S. Championships

(At Squaw Valley, Calif., April 6-8)

## GIANT SLALOM

	Time or Pts.
Men—Tom Corcoran, Portsmouth, N. H.	2:03.3
Men (open class)—Christian Pravda, Sun Valley, Idaho	1:58.0
Women—Sally Deaver, Whitmarsh, Pa.	2:17.0
Women (open class)—Rhona Gillis, Bend, Ore.	2:45.3

## DOWNHILL AND SLALOM

Downhill—William Woods, Mt. Mansfield, Vt.	1:55.3
Slalom—Tom Corcoran	140.9
Combined—William Woods	3.04

## WOMEN

Downhill—Katherine Cox, Port Leyden, N. Y.	2:00.1
Slalom—Sally Deaver	131.4
Combined—Katherine Cox	0.14

## JUMPING

(At Westby, Wis., Jan. 21-22)

	Jumps, ft.
Class A—Keith Zuehlke, Eau Claire, Wis.	201-200
Class B—Jerry Lewis, Duluth, Minn.	176-187
Veterans—Lloyd Severud, Eau Claire, Wis.	190-189
Junior, class A—William Erickson, Iron Mountain, Mich.	203-202

## NORDIC

(At Ishpeming, Mich., Feb. 18-19)

	Time or Pts.
Cross country—Norman Oakvik, Minneapolis	1:08.26
Combined—Per Staavi, Chicago	415.4

## National Collegiate

(At Winter Park, Colo., March 23-25)

	Time or Pts.
Skirmeister—John Cross, Denver	369.23
Downhill—Walt Taulbee, Washington	58:27.8
Slalom—Chiharu Igaya, Dartmouth	127.8
Combined downhill and slalom—Chiharu Igaya	182
Cross-country—Erik Berggren, Idaho	58:27.8
Jumping—Willis Olson, Denver	220.8
Combined cross-country and jumping—Erik Berggren	441.2

## TEAM

	Points
Champion—Denver	582.01
Downhill—Dartmouth	98.14
Slalom—Denver	97.87
Combined downhill and slalom—Dartmouth	98.05
Cross-country—Western State	97.85
Jumping—Denver	99.13
Combined cross-country and jumping—Idaho	98.91

## WATER SKIING

## AMERICAN WATER SKI ASSN. CHAMPIONSHIPS

(At LaPorte, Ind.)

Slalom—Charles Emry, Winter Haven, Fla.	
Jumping—Alfredo Mendoza, Winter Haven, Fla.	
Tricks—Warren Witherell, Bolton Landing, N. Y.	
Women's tricks and slalom—Leah Marie Atkins, Birmingham, Ala.	
Women's jumping—Sandra Lecklider, Holland, Mich.	
Boys' tricks and slalom—Mike Amsbry, Orange, Calif.	
Girls' slalom and tricks—Janelle Kirtley, Birmingham, Ala.	
Girls' jumping—Mary Ann Grass, Winter Haven, Fla.	
Mixed doubles—Tom Dorwin-Janice Dorwin, Minocqua, Wis.	
Veterans' jumping—Bill Goodhue, East Greenwich, R. I.	
Veterans' slalom and tricks—Jack Andresen, Greenwood Lake, N. Y.	
Team (Governor's Trophy)—Long Beach (Calif.) S. C.	

## FLY AND BAIT CASTING

Source: L. S. Williams, Executive Secretary, National Association of Angling and Casting Clubs.

## National Championships

(At San Francisco, Aug. 8-12)

All-around—Marion Garber, Toledo, Ohio

## Official Combined Champions

Distance baits—William J. Lovely, St. Louis	2146 ft.
Distance flies—Jon Tarantino, San Francisco	1065 ft.
All distance—William J. Lovely	3081 ft.
Accuracy baits—Casper Rigamer, New Orleans	198 pts.
Accuracy flies—Jon Tarantino	199 pts.
All accuracy—Casper Rigamer	396 pts.

## WOMEN

Accuracy baits—Norma Collins, Long Beach, Calif.	183 pts.
Accuracy flies—Kay Brodney, San Francisco	193 pts.
All accuracy—Norma Collins	367 pts.

## INTERMEDIATE

Accuracy baits—Allen Sayre-Smith, Los Angeles	196 pts.
Accuracy flies—Allen Sayre-Smith	195 pts.
All accuracy—Allen Sayre-Smith	391 pts.

## Official Distance Events

$\frac{3}{8}$ -oz. bait—Robert Budd, Jeffersonville, Ind.	357 $\frac{1}{2}$ ft. ave., 369 ft. long cast
$\frac{1}{2}$ -oz. bait—William J. Lovely	374 ft. ave., 386 ft. long cast
Trout fly—Jack Crossfield, San Francisco	162 $\frac{3}{4}$ ft. ave., 168 ft. long cast
Salmon fly—Jon Tarantino	195 $\frac{1}{4}$ ft. ave., 207 ft. long cast

## Official Accuracy Events

Dry fly—Myron C. Gregory, Oakland, Calif.	99 pts.
Wet fly—C. F. Forcade, St. Louis	100 pts.
$\frac{3}{8}$ -oz. bait—Billy Peters, Toledo, Ohio	99 pts.
$\frac{1}{2}$ -oz. bait—Casper Rigamer	99 pts.

## WOMEN

Dry fly—Kay Brodney	95 pts.
Wet fly—Roma Saunders, Milwaukee	98 pts.
$\frac{3}{8}$ -oz. bait—Beverly Allen, Smithville, Mo.	92 pts.

## INTERMEDIATE

Dry fly—Allen Sayre-Smith	95 pts.
Wet fly—Allen Sayre-Smith	100 pts.
$\frac{3}{8}$ -oz. bait—Allen Sayre-Smith	98 pts.
$\frac{1}{2}$ -oz. bait—Allen Sayre-Smith	98 pts.

## Skish Events

All-around—Marion Garber and Casper Rigamer (tie)	6 pts.
Accuracy fly—Steve Aleshi, Kansas City, Mo.	100 pts.
Accuracy bait—Casper Rigamer	84 pts.
Distance bait—Casper Rigamer	242 $\frac{3}{4}$ ft. ave., 244 ft. long cast
Distance fly—Jon Tarantino	151 $\frac{3}{4}$ ft. ave., 159 ft. long cast

## WOMEN

Accuracy bait—Jennie Bishop, Long Beach, Calif.	64 pts.
Accuracy fly—Mildred Wolfe, Long Beach, Calif.	79 pts.

## INTERMEDIATE

Accuracy bait—Mike Hubbard, Los Angeles	78 pts.
Accuracy fly—Allen Sayre-Smith	69 pts.

## Skish Combined Events

Accuracy—Casper Rigamer	173 pts.
Distance—Jack Crossfield	1136 ft.
Women's accuracy—Mildred Wolfe	141 pts.
Intermediate accuracy—Allen Sayre-Smith	129 pts.

## Two Aces in One Round

Earl Stewart, Dallas, Texas, professional, shot two hole-in-ones in a nine-hole round in 1956. He holed out his tee shots on the 115-yard No. 3 and the 163-yard No. 7 on his home Oak Cliff C. C. course.

## TENNIS

Wightman Cup (women)—U. S. beat England, 5 to 2, at Wimbledon, England

### United States Champions

Singles—Kenneth Rosewall, Australia  
Doubles—Lewis Hoad-Kenneth Rosewall, Australia  
Women's singles—Shirley Fry, St. Petersburg, Fla.  
Women's doubles—Mrs. Margaret du Pont, Wilmington, Del.-Louise Brough, Beverly Hills, Calif.  
Mixed doubles—Mrs. Margaret du Pont-Kenneth Rosewall

### England (Wimbledon)

Singles—Lewis Hoad  
Doubles—Lewis Hoad-Kenneth Rosewall  
Women's singles—Shirley Fry  
Women's doubles—Angela Buxton, Great Britain-Althea Gibson, New York  
Mixed doubles—Vic Seixas, Philadelphia-Shirley Fry

### France

Singles—Lewis Hoad  
Doubles—Bob Perry, Los Angeles-Don Candy, Australia  
Women's singles—Althea Gibson  
Women's doubles—Angela Buxton-Althea Gibson  
Mixed doubles—Thelma Long, Australia-Luis Ayala, Chile

### Australia

Singles—Lewis Hoad  
Doubles—Lewis Hoad-Kenneth Rosewall  
Women's singles—Mary Carter, Australia  
Women's doubles—Mrs. Mary Hawton-Thelma Long, Australia  
Mixed doubles—Neale Fraser-Beryl Penrose, Australia

### Other U. S. Champions

Junior singles—Rod Laver, Australia  
Junior doubles—Rod Laver-Jim Shaffer, St. Petersburg, Fla.  
Boys' singles—Ray Senkowski, Hamtramck, Mich.  
Boys' doubles—Charles McKinley, St. Louis-Martin Riessen, Hinsdale, Ill.  
Interscholastic singles—Eddie Sledge, Highland Park H. S., Dallas, Texas  
Interscholastic doubles—Dick Ogden-Edward Simmons, Deerfield Academy, Deerfield, Mass.  
Girls' singles (18 and under)—Mimi Arnold, Redwood City, Calif.  
Girls' doubles (18 and under)—Mary Ann Mitchell, San Leandro, Calif.-Rosa Maria Reyes, Mexico  
Girls' singles (15 and under)—Karen Hantze, San Diego, Calif.  
Girls' doubles (15 and under)—Helene Weill, Beverly Hills, Calif.-Karen Hantze  
Senior singles—Bryon M. Grant, Atlanta, Ga.  
Senior doubles—Jean Borotra, France-Harry Hopman, Australia  
Women's senior singles—Mrs. Richard Buck, Manchester, Mass.  
Women's senior doubles—Mrs. Walter Mahony, Chappaqua, N. Y.-Mrs. Clarence Warner, Newton, Mass.

### CLAY COURT

Singles—Herb Flam, Beverly Hills, Calif.  
Doubles—Alex Olmedo, Peru-Pancho Contreras, Mexico  
Women's singles—Shirley Fry  
Women's doubles—Mrs. Dorothy Knodel, Forest Hills, N. Y.-Shirley Fry

### PUBLIC PARKS

Singles—Linn Rockwood, Provo, Utah  
Women's singles—Mrs. Mary Arnold Prentiss, San Bernardino, Calif.

### NATIONAL COLLEGIATE

Singles—Alex Olmedo, Southern California  
Doubles—Alex Olmedo-Pancho Contreras, Southern California  
Team—U. C. L. A.

### INDOOR

Singles—Ulf Schmidt, Sweden  
Doubles—Sam Giammalva, Houston, Texas-Vic Seixas  
Women's singles—Lois Felix, Meriden, Conn.  
Women's doubles—Kay Hubbell, Conway, N. H.-Lois Felix  
Mixed doubles—Ruth Jeffery, Melrose, Mass.-Dever Hobbs, Providence, R. I.  
Senior singles—Dr. Reginald Weir, New York  
Senior doubles—Berkeley Bell, Cresskill, N. J.-Phillip Hanna, Jackson Heights, N. Y.

## SQUASH RACQUETS

### Team

Lapham Trophy (men)—United States 11, Canada 4, at East Providence, R. I.

### United States Champions

Open—Hashim Khan, Pakistan  
Singles—G. Diehl Mateer, Jr., Philadelphia  
Doubles—Carl Badger-Jim Ethridge, Greenwich, Conn.  
Team—New York  
Professional—Al Chassard, Bethlehem, Pa.  
Intercollegiate—Ben Heckscher, Harvard  
Intercollegiate team—Harvard  
Veterans—Germain G. Glidden, Norwalk, Conn.  
Junior—Stephen T. Vehlase, Philadelphia

### WOMEN

Singles—Mrs. Pepper Constable, Princeton, N. J.  
Doubles—Mrs. Charles Wetzel, Cynwyd (Pa.) Club-Mrs. H. L. G. Clement, Merion Cricket Club  
Senior singles—Mrs. John Carrott, Germantown Cricket Club  
Senior doubles—Blanche Day-Mrs. John Carrott, Germantown Cricket Club

### Other Champions

British Open—Hashim Khan  
Cowles Invitation—G. Diehl Mateer, Jr.  
Canadian Open—Roshan Khan, Pakistan  
Canadian Amateur—Henri Salaun, Boston  
Howe Cup (women)—Philadelphia

## TABLE TENNIS

Source: Peter W. Roberts, U. S. Table Tennis Association

### World Championships

(At Tokyo, Japan, April 2-11)

Singles—Ichiro Ogimura, Japan  
Women's singles—Tomi Okawa, Japan  
Doubles—Ichiro Ogimura-Yoshio Tomita, Japan  
Women's doubles—Mrs. Angelica Rozeanu-Ella Zeller, Rumania  
Mixed doubles—Erwin Klein-Mrs. Leah Thall Neuberger, U. S.  
Swaythling Cup (men's team)—Japan  
Corbillon Cup (women's team)—Rumania

### English Open

(At Manchester, England, Feb. 28-March 2)

Singles—Elemer Gyetvai, Hungary  
Women's singles—Giselle Farkas, Hungary  
Doubles—Kalman Szepesi-Elemer Gyetvai, Hungary  
Women's doubles—Diane Rowe-Ann Haydon, England

### U. S. Open

(At White Plains, N. Y., March 16-18)

Singles—Erwin Klein, Los Angeles  
Women's singles—Mrs. Leah Thall Neuberger, New York  
Doubles—Richard Bergmann, England-Erwin Klein  
Women's doubles—Mildred Shahian, Chicago-Mrs. Leah Thall Neuberger  
Mixed doubles—Sol Schiff-Mrs. Leah Thall Neuberger, New York  
Junior singles—Erwin Klein  
Junior doubles—Roger Desormeaux-Denis Limoges, Montrea  
Junior girls' singles—Sharlene Krizman, South Bend, Ind.  
Boys' singles—Norbert Van de Walle, Chicago  
Girls' singles—Jackie Koehnke, Glen Ellyn, Ill.  
Senior singles—Laszlo Bellak, Miami, Fla.  
Senior doubles—Tibor Hazi, Chevy Chase, Md.-Laszlo Bellak  
Esquire singles (men 50 years or over)—William Gunn Mamaroneck, N. Y.

# ROWING

Source: C. Leverich Brett, Editor, National Association of Amateur Oarsmen Year Book and NAAO Rowing News.

## Intercollegiate Rowing Assn.

(At Syracuse, N. Y., June 16)

Varsity (3 miles)—1, Cornell (16:22.4); 2, Navy (16:31.5); 3, Wisconsin (16:34.7); 4, Washington (16:34.9); 5, Stanford (16:37.1); 6, Penn (16:40.3); 7, Princeton (16:42.7); 8, Syracuse (16:45.2); 9, M. I. T. (16:55.1); 10, California (17:06.7); 11, Boston U. (17:10.7); 12, Columbia (17:40.4).  
Junior Varsity (3 miles)—1, Washington (17:01.5); 2, Cornell; 3, Princeton; 4, Penn; 5, Navy; 6, California; 7, Syracuse; 8, Columbia.  
Freshman (2 miles)—1, Syracuse (11:42.0); 2, Navy; 3, Washington; 4, Cornell; 5, Penn; 6, Princeton; 7, Wisconsin; 8, M. I. T.; 9, Dartmouth; 10, Columbia.

Jim Ten Eyck Trophy—Cornell (16 pts.)

## Eastern Assn. of Rowing Colleges

(At Washington, D. C., May 12—2,000 meters)

Varsity—Cornell (6:10.0)  
Junior varsity—Cornell (6:15.9)  
Freshman—Navy (6:35.6)  
Rowe Cup—Cornell (18 pts.)

## LIGHTWEIGHT

(At Princeton, N. J., May 12—2,000 meters)

Varsity (Wright Cup)—Princeton (6:31.2)  
Junior varsity—Cornell (6:47.3)  
Freshman—Princeton (6:44.8)

## Yale-Harvard

(At New London, Conn., June 16)

Varsity (4 miles)—Yale (19:26.0) (19:26)  
Junior Varsity (2 miles)—Yale (9:44)  
Freshman (2 miles)—Yale (9:38.2)

## Other Intercollegiate Regattas

Adams Cup (1½ miles)—Harvard (9:49)  
Blackwell Cup (5/16 miles)—Yale (7:17.3)  
Larnegie Cup (2 miles)—Yale (10:29.6)  
Childs Cup (2 miles)—Princeton (9:45)  
Jorjontown Cup (1½ miles)—Princeton (8:42.8)  
Mad Vail Trophy (1 5/16 miles)—LaSalle (6:59.3)  
Florida State championship (1 5/16 miles)—Rollins (6:49.0)  
Joes Trophy (1 mile)—Cornell (4:59)  
Oxford-Cambridge (4½ miles)—Cambridge (18:36)  
Penn-Cornell (2½ miles)—Cornell (11:45)

## United States Championships

(Distances 2,000 meters except sprints)

(At Syracuse, N. Y., June 28-July 1)

Fours with coxswain—West Side R. C., Buffalo, N. Y. 7:13.8  
Pairs without coxswain—Navy 7:22.8  
Single sculls—Jack Kelly Jr., Vesper B. C., Philadelphia 8:15.5  
Pairs with coxswain—Stanford Crew Assn. 8:46.3  
Fours without coxswain—Detroit B. C. 7:13.0  
Double sculls—Detroit B. C. 7:46.4  
Eight-oared crews—Yale 6:33.5

(At Philadelphia, July 4)

Association singles—William Reimann, Undine Barge Club, Philadelphia 7:17  
¼-mile dash—William Knecht, Vesper B. C. 6:15.4  
Quadruple sculls—New York A. C. 6:15.0  
Intermediate eight—Detroit B. C. 7:30.6  
150-lb. singles—James Barker, Undine Barge Club 1:17.4  
150-lb. dash—James Barker 6:56.0  
150-lb. doubles—Vesper B. C. 6:49.2  
150-lb. quads—Vesper B. C. rowerover  
150-lb. fours with coxswain—West Side R. C. 7:22.2

Team (Barnes Trophy)—Detroit B. C. 114½ pts.

## NATIONAL INTERSCHOLASTIC

8-oared shell (1 mile)—George Washington H. S., Alexandria, Va. (5:28.4)  
Single sculls—Jon Robert Pearce, Hamilton School, Canada (8:31.5)

## British Royal Henley

Diamond Sculls—Teodor Kocerka, Poland  
Grand Challenge Cup—Kecser Army Crew (7:06)  
Thames Challenge Cup—Princeton (7:10)

## Canadian Henley

Single sculls—Pat Costello, Detroit B. C.  
Double sculls—Detroit B. C.  
8-oared shell—West Side R. C., Buffalo, N. Y.  
Team—West Side R. C., Buffalo, N. Y.

# CANOEING

Source: Walter Haner Jr., Secretary, National Paddling Committee, American Canoe Association.

## U. S. Paddling Championships

(At Philadelphia, July 29—1,000-meter course)

1-man single blade—Frank Havens, Washington C. C. 5:18.3  
Tandem single—John Haas-Frank Krick, Philadelphia C. C. 5:06.0  
1-man single—Philadelphia C. C. (F. Krick, J. Haas, H. Rotzell, J. Barnitz) 4:36.2  
1-man double—Raymond Clark, U. S. Army 4:52.5  
Tandem double—Raymond Clark-Wally Haase, Potomac B. C., and John Pagkos-Russell Dermond, U. S. Navy (tie) 4:12.3  
1-man double—Potomac B. C. (R. Clark, P. Yaeger, T. Jones, W. Haase) 4:37.9

## JUNIOR

1-man single—William Schuette, Potomac B. C. 5:38.0  
Tandem single—Mike Pagkos-Allan Geraty, Yonkers C. C. 5:15.5  
1-man single—Yonkers C. C. (B. Sec. L. Cooper, D. Kelly, B. Mannly) 5:08.6  
1-man double—Ken Wilson, Inwood C. C. 4:52.5  
Tandem double—Clem Hourican-Mike Pagkos, Yonkers C. C. 4:24.0  
1-man double—Wanda C. C. (W. Van Kuren, M. Wallack, N. Messerschmidt, M. Perotta) 4:47.7  
Woodenough Trophy—Ken Wilson, William Schuette and Mike Pagkos (tie)

## TEAM POINT SCORES

Yonkers C. C. 32  
Potomac B. C. 20  
Philadelphia C. C. 15  
Amoset C. C. 10  
Wanda C. C. 8  
Sebago C. C. 7  
Inwood C. C. 7  
Washington C. C. 5  
Pendleton C. C. 4

## North American Championships

(At Lake Sebago, N. Y., Aug. 19—1,000-meter course)

1-man single—Don Stringer, Canada 4:30.2  
Tandem single—D. Brown-A. McCleary, Canada 4:55.0  
4-man single—Canada (B. Oldershaw, B. Collins, R. McKeesock, P. Lambert) 4:20.6  
1-man double—Phil Donohue, U. S. 4:30.0  
Tandem double—R. Smith-L. Mella, Canada 4:00.4  
4-man double—Canada (D. McMorran, L. Lukanovich, B. Gray, J. McMorran) 4:15.9

## 10,000-METER COURSE

1-man single—Don Stringer  
Tandem double—V. Reece-R. Cordner, Canada

## Sugar Island Races

Championship Trophy (1 mile double blade)—Dave Merwin, Turkeyfoot C. C.  
Wilkin Trophy (4-man single)—Philadelphia CC. (F. Krick, J. Haas, H. Rotzell, J. Barnitz)  
J. K. Hand Trophy (4-man double)—Inwood G. C. (K. Wilson, E. Houston, E. Feicht, R. O'Brien)

## Sailing

U. S. Deeded—Lew Whitman, Miramar Y. C.  
U. S. Cruising Sailing—Roger Wilkinson, Sheeps-bayou C. C.



## BOXING

### World Championship Fights in 1956

Date	Title at stake	Defender	Challenger	Winner	Round	Where held
Jan. 11	Flyweight	Pascual Perez	Leo Espinosa	Perez	15	Buenos Aires
Jan. 18	Featherweight	Sandy Saddler	Flash Elorde	Saddler	KO 13	San Francisco
Mar. 14	Welterweight	Carmen Basilio	Johnny Saxton	Saxton	15	Chicago
Mar. 25	*Bantamweight	Raul Macias	Leo Espinosa	Macias	KO 10	Mexico City
May 18	Middleweight	Ray Robinson	Carl Olson	Robinson	KO 4	Los Angeles
June 5	Light heavyweight	Archie Moore	Yolande Pompey	Moore	KO 10	London
June 29	Bantamweight	Robert Cohen	Mario D'Agato	D'Agato	KO 6	Rome
June 30	Flyweight	Pascual Perez	Oscar Suarez	Perez	KO 11	Montevideo
Aug. 3	Flyweight	Pascual Perez	Ricardo Valdez	Perez	KO 5	Tandil, Arg.
Aug. 24	Lightweight	Wallace Smith	Joe Brown	Brown	15	New Orleans
Sept. 12	Welterweight	Johnny Saxton	Carmen Basilio	Basilio	KO 9	Syracuse

\* Recognized by National Boxing Association.

### AMATEUR BOXING

#### National A. A. U. Championships

(At Boston, April 9-11)

112 lb.—Albert Pell, New York  
 119 lb.—Don Whaley, Cincinnati  
 125 lb.—Harry Smith, New York (Air Force)  
 132 lb.—Bill Cherry, Cleveland (Air Force)  
 139 lb.—Tommy Thomas, Portland, Ore.  
 147 lb.—Jackson Brown, Chicago (Air Force)  
 156 lb.—Frank Davis, Fort Wayne, Ind. (Air Force)  
 165 lb.—Sixto Rodriguez, San Francisco  
 178 lb.—John Horne, Omaha (Air Force)  
 Heavyweight—Jim McCarter, Seattle

#### National Collegiate

(At Madison, Wis., April 12-14)

112 lb.—Dean Plemmons, Wisconsin  
 119 lb.—Choken Maekawa, Michigan State  
 125 lb.—Bobby Soileau, Louisiana State  
 132 lb.—Dick Rall, Washington State  
 139 lb.—Dick Bartman, Wisconsin  
 147 lb.—Gil McLane, Louisiana State  
 156 lb.—Vince Ferguson, Wisconsin  
 165 lb.—Roger Rouse, Idaho State  
 178 lb.—Orville Pitts, Wisconsin  
 Heavyweight—Truman Sturdevant, Wisconsin  
 Team—Wisconsin (47 pts.)  
 John S. LaRowe Trophy (outstanding boxer)—Maekawa

### MOTORCYCLING

Source: L. A. Kuchler, Assistant Secretary, American Motorcycle Association.

#### National Championships

Cross country (150 mi.)—Bill Postel, 4:07:00.00  
 L. Canada, Calif.  
 10-mi. dirt track—Everett Brashear, 9:40.10  
 Beaumont, Texas.  
 100-mi. road race—Brad Andres, San 1:43:05.36  
 Diego, Calif.  
 20-mi. dirt track—Joe Leonard, San Jose, 17:02.62  
 Calif.  
 Endurance run (500 mi.)—LeRoy Win-  
 ters, Fort Smith, Ark.  
 Hillclimb, 74 cu. in. professional—  
 Howard Mitzell, York, Pa. 06.78  
 Hillclimb, 45 cu. in. amateur—Phillip  
 Rockwell, Victor, N. Y. 07.60  
 TT, 45 cu. in.—Brad Andres. 7:19.70  
 TT, 86 cu. in.—Joe Leonard. 7:16.80

#### Other Events

Handlebar Derby, 200 mi. (beach and  
 road)—John Gibson, Duarte, Calif. 1:04:06.72  
 25-mi. national classic dirt track—Ever-  
 ett Brashear. 17:34.90  
 100-mi. speedway classic—Everett Bra-  
 shear. 1:09:30.87

### WRESTLING

#### National A. A. U. Championships

(At Tulsa, Okla., March 26-29)

#### FREE-STYLE

114.5 lb.—Dick Delgado, Sooner A. C., Norman, Okla.  
 125.5 lb.—Bill Carter, Tulsa Y.M.C.A.  
 136.5 lb.—Alan Rice, New York A. C.  
 147.5 lb.—Tommy Evans, Tulsa Y.M.C.A.  
 160.5 lb.—Bill Fischer, Sooner A. C.  
 174 lb.—Dan Hodge, Sooner A. C.  
 191 lb.—Peter Blair, U. S. Navy  
 Heavyweight—Bill Kerslake, Case A. C., Cleveland  
 Team—Sooner A. C. (26 pts.)

#### GRECO-ROMAN

114.5 lb.—Ray Osborne, Olympic Club, San Francisco  
 125.5 lb.—Jack Blubaugh, Tulsa Y.M.C.A.  
 136.5 lb.—Alan Rice  
 147.5 lb.—Gerald Maurey, Sooner A. C.  
 160.5 lb.—Khalil Taha, Ford Wrestlers, Dearborn, Mich.  
 174 lb.—Dan Hodge  
 191 lb.—Ken Maidlow, Michigan State  
 Heavyweight—Bill Kerslake  
 \*Team—Tulsa Y.M.C.A. (14 pts.)

\* The New York A. C. also scored 14 points, but the Tulsa Y.M.C.A. was awarded trophy on the strength of the two second places to the New York A. C.'s one.

#### National Collegiate

115 lb.—Terrance McCann, Iowa  
 123 lb.—Ed Peery, Pittsburgh  
 130 lb.—Myron Roderick, Oklahoma A. & M.  
 137 lb.—Jim Sinadinos, Michigan State  
 147 lb.—Ed Eichelberger, Lehigh  
 157 lb.—Larry TenPas, Illinois  
 167 lb.—Edward DeWitt, Pittsburgh  
 177 lb.—Dan Hodge, Oklahoma  
 191 lb.—Kenneth Leuer, Iowa  
 Heavyweight—Gordon Roesler, Oklahoma  
 Team—Oklahoma A. & M. (65 pts.)

#### Eastern Intercollegiate

123 lb.—Sidney Nodland, Penn State  
 130 lb.—John Johnston, Penn State  
 137 lb.—Joe Gratto, Lehigh  
 147 lb.—Ed Eichelberger, Lehigh  
 157 lb.—Dave Johnson, Pittsburgh  
 167 lb.—Don Huff, Pittsburgh  
 177 lb.—Edward DeWitt, Pittsburgh  
 Heavyweight—William Oberly, Penn State  
 Team—Pittsburgh

# GYMNASTICS

## National A. A. U. Championships

(At University Park, Pa., April 27-28)

All-around—John Beckner, Los Angeles Turners.....	105.90
Calisthenics—Chick Cicio, Florida State Gymkana.....	17.90
Long horse—Charles Simms, Los Angeles Turners.....	17.70
Side horse—Joseph Kotys, Cleveland Swiss Turners.....	17.90
Parallel bars—John Beckner.....	18.95
Horizontal bar—Abie Grossfeld, Champaign, Ill.....	18.50
Still rings—Richard Beckner, Los Angeles Turners.....	18.55
Flying rings—Fred Hoerner, U. S. Naval Academy.....	9.3
Tumbling—James Sebbo, Jersey City Department of Recreation.....	9.3
Rope climb—Robert Manning, Reseda, Calif.....	3.2
Trampoline—Ronald Munn, Nards Trampoline Club, Amarillo, Texas.....	9.35

## WOMEN

All-around—Sandra Ruddick, Athenaeum Turners, Indianapolis.....	71.85
Calisthenics—Muriel Davis, Athenaeum Turners, and Joyce Racek, Lincoln Turners, Chicago (tie).....	17.60
Balance beam—Sandra Ruddick.....	17.20
Side horse vaulting—Sandra Ruddick.....	18.65
Uneven parallel bars—Sandra Ruddick.....	18.25
Tumbling—Barbara Galleher, Dallas (Texas) A. C.....	18.85

## National Collegiate

(At Chapel Hill, N. C., March 23-24)

Free exercise—Janille Ashmore, Florida State.....	272
Rope climb—Philip Mullen, Penn State.....	3.5
Side horse—James Brown, Los Angeles State.....	276
Horizontal bar—Ronnie Amster, Florida State.....	279
Trampoline—Don Harper, Florida State.....	276
Parallel bars—Armando Vega, Penn State.....	279
Flying rings—Fred Hoerner, Navy.....	267
Tumbling—Dan Lirot, Illinois.....	275
All-around—Don Tonry, Illinois.....	1493
Team—Illinois.....	123½

## Eastern Intercollegiate

(At West Point, N. Y., March 9-10)

All-around—Armando Vega, Penn State.....	1546
Side horse—Richard Adams, Army.....	185
Horizontal bar—Willis Thomson, Army.....	265
Rope climb—Philip Mullen, Penn State.....	3.6
Parallel bars—Armando Vega.....	255
Flying rings—Fred Hoerner, Navy.....	261
Tumbling—Richard Hall, Syracuse.....	271

# BILLIARDS

Source: John Canelli, Secretary, Billiard Congress of America.

Ray Kilgore retained his world three-cushion championship in 1956 in a challenge match with John Fitzpatrick in Los Angeles. Kilgore defeated Fitzpatrick, 600 to 576.

## Intercollegiate Champions

Pocket—Joseph Sapanaro Jr., Suffolk
Three-cushion—Robert Strange, Michigan State
Straight rail—Tulio Carta, Michigan State
Co-ed pocket—Judy Ferles, Arizona

## TEAM

Pocket—Michigan State
Three-cushion—Michigan State
Straight rail—Michigan State
Co-ed pocket—Arizona

## Boys' Clubs of America

Senior—Marvin Goldstein, Albany (N. Y.) B. C.
Junior—William Saunders, R. W. Brown B. C., Philadelphia
Team—Albany (N. Y.) B. C.

# BOWLING

## CHAMPIONS

### American Bowling Congress

All-events—Bill Lillard, Chicago.....	2018
Singles—George Wade, Steubenville, Ohio.....	744
Doubles—Bill Lillard-Stan Gifford, Chicago.....	1331
Team—Falstaff Brewery, Chicago.....	3097
Masters—Dick Hoover, Akron, Ohio (W 8, L 1)	

### Match Game Champions

(Bowling Proprietors Assn. of America)

Singles—Bill Lillard, Chicago.....	304.30
Doubles—Ray Bluth-Dick Weber, St. Louis.....	10,043
Team—Budweiser Beer, St. Louis.....	26,249
Women's Singles—Anita Cantaline, Detroit.....	144.30
Women's Doubles—Elvira Toeffer-Anita Cantaline, Detroit.....	6003

### Women's International Bowling Congress

All-Events—Doris Knechtges, Detroit.....	1867
Singles—Lucille Noe, Columbus, Ohio.....	708
Doubles—Betty Maw-Mary Quinn, Buffalo, N. Y.....	1242
Team—Daniel Ryan, Chicago.....	2880

# DUCK PINS

## CHAMPIONS

### National Duck Pin Bowling Congress

All-events—August Recchia, Baltimore.....	1200
Singles—Al Burrell, Atlanta, Ga.....	430
Doubles—August Recchia-Chester Becker, Baltimore.....	777
Team—Arrow "77," Baltimore.....	1900
Mixed Doubles—Pearl Heim-George Young, Baltimore.....	809

## Women

All-events—Betty Mooney, Baltimore.....	1107
Singles—Betty Mooney, Baltimore.....	391
Doubles—Lora Farmer-Helen Lawrence, Baltimore.....	757
Team—New Essex, Baltimore.....	1737

# LACROSSE

Source: Jack Kelly, Editor, The Lacrosse Newsletter.

## 1956 Champions

College (Wingate Trophy)—Maryland
Club—Mt. Washington, Baltimore
"Open"—U. of Maryland
North-South Game—South 20, North 10, at Geneva, N. Y.

## Other Trophy Winners

Cy Miller—Maryland
Laurie Cox—U. of Baltimore
Roy Taylor—Colgate

## 1956 All-American Selections

FIRST TEAM—Goal: James Kappler, Maryland. Defense: John Simmons, Maryland; John Pendergast, Yale; Peter Wagner, R. P. I. Midfield: James Keating, Maryland; Robert Kelley, Rutgers; Arlyn Marshall, Johns Hopkins. Attack: Charles Wicker, Maryland; Stuart Lindsay, Syracuse; John Howard, Washington College.
SECOND TEAM—Goal: Clifford Eley, Navy. Defense: William Lovejoy, Yale; John Petersen, Princeton; Ben Glyphis, Army. Midfield: James Brown, Syracuse; Don Nichols, Virginia; Ron Beagle, Navy. Attack: Perry Smith, Army; Robert Andrews, Rutgers; John Fisher, R. P. I.

## Lillard Wins 3 ABC Titles

Bill Lillard of Chicago in 1956 became the first man in the history of the American Bowling Congress to win three championships in one tournament. The 28-year-old Lillard captured the all-events crown, shared the doubles title with Stan Gifford, and was a member of the championship Falstaff Brewery team.

## ROLLER SKATING

### A. R. S. A. CHAMPIONS

Source: United States Amateur Roller Skating Association.

#### National

(At Chicago, July 1-7)

##### SINGLES

Men's senior—Billy Ferraro Jr., Livonia, Mich.  
 Women's senior—Doris Dahl, Bayonne, N. J.  
 Men's junior—Fred Wheeler, Bladensburg, Md.  
 Women's junior—Nancy Galbraith, Livonia, Mich.  
 Men's intermediate—David Julien, Livonia, Mich.  
 Women's intermediate—Dawn Brown, Trenton, N. J.  
 Men's novice—Robert McDonald, Trenton, N. J.  
 Women's novice—Susan Lessne, Levittown, N. Y.  
 Boys' juvenile—Gregory Brooks, Melrose Park, Ill.  
 Girls' juvenile—Sandra Elliott, Livonia, Mich.

##### PAIRS

Senior—Billy Ferraro-Barbara Searles, Livonia, Mich.  
 Women's senior—Alice Betzler-Elizabeth Cunningham, Bayonne, N. J.  
 Senior dance—Raymond Tiedemann-Jeanne Tiedemann, Mount Vernon, N. Y.  
 Junior—William Binner-Dawn Brown, Trenton, N. J.  
 Junior dance—Robert Lange-Carol Nanch, Levittown, N. Y.  
 Intermediate—Jack Becker-Sue Kalavittinos, Bladensburg, Md.  
 Intermediate dance—Jay Slaughter-Janet Larsen, Melrose Park, Ill.  
 Novice—George Frazer-Sharon Minton, Livonia, Mich.  
 Women's novice—Linda Kobane-Sandra Somerville, Livonia, Mich.  
 Novice dance—John Sorrentino-Marilyn Sorrentino, Melrose Park, Ill.  
 Juvenile—Allen Kingsley-Patricia Seibel, Elizabeth, N. J.  
 Juvenile dance—Steven Courtney-Gaya Jo Nelson, Marion, Ind.

##### FOURS

Senior—Elizabeth, N. J. (Heisler, Ludwig, Schmitt, Malloy)  
 Intermediate—Bayonne, N. J. (Gatty, Colalo, West, Reed)

##### SPEED

Men's senior—Dee Rigg, San Francisco  
 Women's senior—Furn Walton, Washington, D. C.  
 Men's junior—Peter Mangone, Mount Vernon, N. Y.  
 Women's junior—May Hansen, Mount Vernon, N. Y.  
 Men's intermediate—Ronny Viletto, Mount Vernon, N. Y.  
 Women's intermediate—Joan Hobeck, Alexandria, Va.  
 Men's novice—Robert Monar, Bayonne, N. J.  
 Women's novice—Sandra Pettit, Bladensburg, Md.  
 Boys' juvenile—Kent Wall, Fort Wayne, Ind.  
 Girls' juvenile—Diana Loy, Bladensburg, Md.  
 Men's relay—Ronnie Spillman-George Thomas, Alexandria, Va.  
 Women's relay—Furn Walton-Barbara Fugel, Washington, D. C.

### RINK OPERATORS CHAMPIONS

Source: Roller Skating Rink Operators Association of America.

#### American

(At Richmond, Va., July 25-Aug. 3)

##### SINGLES

Men's senior—Edgar Watrous, Waltham, Mass.  
 Women's senior—Suzan Cowan, Greeley, Colo.  
 Men's intermediate—Robbie Wollard, Long Beach, Calif.  
 Women's intermediate—Sylvia Stenovec, Portland, Ore.  
 Men's novice—Warren Denicker, Brooklyn, N. Y.  
 Women's novice—Marjorie Cianflone, Elmont, N. Y.  
 Boys' junior—Ricky Mullican, Long Beach, Calif.  
 Girls' junior—Peggy Tipton, Long Beach, Calif.

##### PAIRS

Senior—Warren Colozzo-Patricia Benedict, Brooklyn, N. Y.  
 Senior dance—Gary Castro-Marilyn Roberts, San Diego, Calif.  
 Intermediate—Ricky Mullican-Judith Nance, Long Beach, Calif.  
 Intermediate dance—Robert Castro-Gloria Schaffer, Redwood City, Calif.  
 Novice—Robbie Wollard-Carol Stout, Long Beach, Calif.  
 Novice dance—Thomas Wells-Jerry Kenslow, Tulsa, Okla.  
 Junior—Jerry Tangen-Tina Seabern, Long Beach, Calif.  
 Junior dance—Jerry Tomlinson-Nancy Wright, Tulsa, Okla.

##### FOURS

Senior—Peoria, Ill. (Haller, Jellse, Anderson, Kock)  
 Intermediate—Long Beach, Calif. (Maguire, Duput, Daniels, Macomber)  
 Novice—Long Beach, Calif. (McCollum, Parke, Panno, Sloan)  
 Junior—Pontiac, Mich. (Steward, Martins, Welch, Parker)

##### SPEED

Men's senior—Earl Wilmot, Richmond, Ind.  
 Women's senior—Noreen Knapp, Redondo Beach, Calif.  
 Men's intermediate—Joseph Mauro, Brooklyn, N. Y.  
 Women's intermediate—Suzanne Richardson, DeBoys' junior—Gerald Gohs, Dearborn, Mich.  
 Girls' junior—Harless Monical, Greeley, Colo.

##### RELAYS

Men—Brooklyn, N. Y. (Calvano, Johnson, Abrami, Bellfield)  
 Women—Greeley, Colo. (A. Carlson, Monical, Gettman, J. Carlson)  
 Mixed—Detroit (Kirk, Waters, Ireson, Vandehagen)

##### FIGURES

Men's senior—Ronald Jellse, Peoria, Ill.  
 Women's senior—Joan Brown, St. Louis, Mo.  
 Men's intermediate—Terry Middleton, Peoria, Ill.  
 Women's intermediate—Beverly Hetherington, Detroit, Mich.  
 Men's novice—Don Tapperson, Springfield, Mo.  
 Women's novice—Joan LaBelle, Lowell, Mass.  
 Boys' junior—Richard Souza, Marysville, Calif.  
 Girls' junior—Faulette Stewart, San Leandro, Calif.

## HANDBALL

### Amateur Athletic Union

#### FOUR-WALL

(At New York City)

Singles—Jimmy Jacobs, Los Angeles A. C.  
 Doubles—Phil Collins-Johnny Sloan, Chicago Town Club

#### ONE-WALL

(At Brooklyn, N. Y.)

Singles—Harold Hanft, Rockaway H. C., New York  
 Doubles—Vic Hershkowitz-Art Locker, Brooklyn Central Y.M.C.A.

### U. S. H. A. Four-Wall Championships

(At St. Louis)

Singles—Jimmy Jacobs, Los Angeles A. C.  
 Doubles—Sam Haber-Ken Schneider, Irving Park Y.M.C.A., Chicago  
 Masters doubles—Joe Shane-Alex Boiseree, Los Angeles  
 Intercollegiate singles—Ray Elliott, Purdue  
 Intercollegiate team—Texas

#### Y.M.C.A.

(At Reading, Pa.)

Singles—Jimmy Jacobs, Hollywood, Calif.  
 Doubles—Phil Collins-Johnny Sloan, Irving Park, Chicago



## FENCING

Source: Amateur Fencing League of America.

### United States Champions

(At New York, June 7-15)

Foil—Sewall Shurtz, U. S. Navy, California  
 Epee—Abram Cohen, Fencers Club, New York  
 Saber—Dr. Tibor Nyilas, Salle Santelli, New York  
 Women—Janice Lee Romary, Los Angeles

### TEAM

Foil—Fencers Club (Daniel Bukantz, Nathaniel Lubell, Austin Prokop, Aubrey Seeman)  
 Epee—Salle Csizsar, Philadelphia (Richard Dyer, Paul Makler, Allan Ruben)  
 Saber—Salle Santelli (Robert Blum, Sol Gorlin, Dr. Tibor Nyilas, Alex Treves)  
 Three-weapon—U. S. Air Force (Robert Goldman, Henry Kolowrat, Thomas Carhart)  
 Women—Southern California (Maxine Mitchell, Janice Lee Romary)

### National Collegiate

(At Annapolis, Md., March 23-24)

Foil—Ralph DeMarco, Columbia  
 Epee—Kinmont Hoitsma, Princeton  
 Saber—Gerald Kaufman, Columbia  
 Team—Illinois

### Intercollegiate Association

(At New York, March 9-10)

Foil—Joe Crisanti, Cornell  
 Epee—Kinmont Hoitsma, Princeton  
 Saber—Martin Wertlieb, C. C. N. Y.  
 Foil team—Cornell  
 Epee team—Navy  
 Saber team—C. C. N. Y.  
 Three-weapon—Navy

## CYCLING

### World Championships

(At Copenhagen, Denmark, Aug. 25-29)

Professional road—Rik Van Steenbergen, Belgium  
 Amateur road—Frans Mahn, Holland  
 Professional sprint—Antonio Maspes, Italy  
 Amateur sprint—Michel Rosseau, France  
 Professional pursuit—Guido Messina, Italy  
 Amateur pursuit—Ercolo Baldini, Italy  
 Professional motor-paced—Graham French, Australia

### United States Amateur

Open—Jack Disney, Altadena, Calif.  
 Mile—Jack Disney  
 2-mile—James Rossi, Chicago  
 5-mile—Jack Disney  
 10-mile—William Pfing, Cranford, N. J.  
 Junior open—Dave Staub, San Francisco  
 Girls open—Nancy Neimann, Detroit

### Tour of France

(22 stages—2,760 miles)

	h	m	s
1—Roger Walkowiak, France.....	124	01	16
2—Gilbert Bauvin, France.....	124	02	41
3—Jean Adriaenssens, Belgium.....	124	05	00
4—Federico Bahamontes, Spain.....	124	11	30
5—Nino Defilippis, Italy.....	124	11	41
Team—Belgium			

### Endurance Cycling Record

Richard Berg, a Naval dental technician from Chicago, set a coast-to-coast cycling record in 1953 by pedalling the 2,976 miles from Santa Monica, Calif., to New York City in 14 days 19 hours 45 minutes. The previous mark was 20 days 7 hours 29 minutes.

## YACHTING

Source: Bill Love, Boating Editor, N. Y. Journal-American

### Distance Racing

Newport to Bermuda—Finisterre (38-ft. yawl), Carleton Mitchell, Annapolis, Md.  
 Chicago to Mackinac—Fleetwood (38-ft. yawl), Nick Geib.  
 Chicago to Saugatuck—Freebooter (10-meter sloop), Mac and Bob Pohn, Chicago  
 Galveston to Corpus Christi—Whispering Wind, Norman Holmes, Corpus Christi, Texas.  
 Los Angeles to Tahiti—Jada (56-ft. yawl), Bill Sturgis, San Marino, Calif.  
 Milwaukee to Muskegon—Copperhead (47-ft. yawl), Charles L. Kotovic, Milwaukee, Wis.  
 Port Huron to Mackinac—Gypsy, Joseph F. Schoendorf Jr., Milwaukee, Wisc.  
 Southern Ocean Racing Conference Championship—Finisterre  
 Tampa to Sarasota—Winifred (39-ft. yawl), John Hayward, Clearwater, Fla.  
 Torquay, England to Lisbon, Portugal—Moyana (British ketch), big boats; Artica II (Italian entry), under 100-ton class.

### International

Bermuda vs. Indian Harbor Y. C., Greenwich, Conn. (Aberfeldy Trophy, Luders-16 class sloops)—Bermuda.  
 Bermuda vs. L. I. Sound (Amorita Cup, Internationals)—Bermuda, spring series.  
 Bermuda vs. U. S. A. (Edward Prince of Wales Cup, 5.5 Meter)—U. S., Rush IV, Victor Sheronas, Philadelphia.  
 North American 6-Meter—Canada, Buzzy 111, Brian Newkirk, sailed by N. W. Gooderham.  
 Seawanhaka Challenge Cup (6-Meter)—Canada, Titia, Edward Barker, sailed by N. W. Gooderham.  
 Norway vs. Manhasset Bay, N. Y. (Internationals)—Manhasset Bay.

### Other Champions

Luders-16, International—J. Shelby Friedrichs, New Orleans  
 Penguin, International—Bob Smith, Chicago  
 Y-Flyer, International—Bill Berry, Atlanta, Ga.  
 Moth, International—Don Lapp, Miami, Fla.  
 Star, North American—Howard Lippincott, Elk River, N. J.  
 Snipe, National—Clark King, Los Angeles  
 Thistle, National—Gordon Douglass, Mentor Harbor, Ohio.  
 Two-Ten, National—Greg Bemis, Cohasset, Mass.  
 One-Ten, National—Malcolm MacNaught, Hingham, Mass.  
 Raven, National—Bob Polhemus, Noroton, Conn.  
 Atlantic, National—Hoyt O. Perry, Jr. (Carolina), Southport, Conn.  
 5.5-Meter National—Dr. Britton Chance (Complex II), Philadelphia  
 Snipe, North Atlantic—Arthur Karpf (My Syn), City Island, N. Y.  
 E-Scow, Eastern—George Bouckhuyt, Lakewood, N. Y.  
 Lightning, Atlantic Coast—Dick O'Donnel—Charles Dore, Little Egg Harbor, N. J.  
 Manhasset Bay Challenge Cup (Two-Ten class)—John Adams (Snooky), Marblehead, Mass.  
 National Intercollegiate Dinghy—Navy.  
 Men's North American (Mallory Cup)—Ted Hood, Marblehead, Mass.  
 North American Junior (Sears Bowl)—Corinthian Y. C., Seattle, Wash.  
 National Women's Sailing Ch. (Adams Trophy)—Fort Worth, Texas.

## HORSESHOE PITCHING

### World Tournament

(At Murray, Utah, July 18-25)

Champion—Ted Allen, Boulder, Colo.  
 Class B—Sam Sommerhalder, Ruskin, Neb.  
 Junior—Billy Madsen, American Fork, Utah  
 Women—Vicki Chapelle, Portland, Ore.

## DOG SHOWS

Westminster best-in-show—Bertha Smith's Ch. Wilber White Swan (toy poodle), Bethpage, N. Y.  
 Morris and Essex best-in-show—Mrs. Sydney K. Allman Jr.'s Ch. Roadcoach Roadster (Dalmatian), Doylestown, Pa.

## GOLF

## Championships

## U. S. Open

(At Oak Hill C. C., Rochester, N. Y., June 14-16)

Cary Middlecoff, Dallas.....	71	70	70	281
Ben Hogan, Fort Worth.....	72	68	72	70-282
Julius Boros, Southern Pines, N. C....	71	71	71	69-282
Peter Thomson, Australia.....	70	69	75	71-285
Ted Kroll, Ft. Lauderdale, Fla.....	72	70	70	73-285
Ed Furgol, St. Louis.....	71	70	73	71-285
Arnold Palmer, Latrobe, Pa.....	72	70	72	73-287
*Ken Venturi, San Francisco.....	77	71	68	73-289
Wesley Ellis, River Vale, N. J.....	71	70	71	78-290
Doug Ford, Mahopac, N. Y.....	71	75	70	74-290
Jerry Barber, Los Angeles.....	72	69	74	75-290

\* Amateur.

British Open—Peter Thomson, Australia.....	286
Masters—Jack Burke Jr., Klamasha Lake, N. Y. 289	
National P. G. A.—Jack Burke Jr., defeated Ted Kroll, Ft. Lauderdale, Fla., 3 and 2, in final.	
Eastern Open—Arnold Palmer, Latrobe, Pa.....	277
Western Open—Mike Fetchik, Mahopac, N. Y. (a) 284	
Canadian Open—*Doug Sanders, Miami Beach, Fla.....	273

(a) Won title with a 66 in 4-way playoff.

## Amateur

U. S.—Harvie Ward, San Francisco, defeated Charles Kocsis, Royal Oak, Mich., 5 and 4, in final	
British—John Beharrell, England	
Canadian—Moe Norman, Kitchener, Ont.	
Southern—Arnold Blum, Macon, Ga.	
Western—Mason Rudolph, Clarksville, Tenn.	
Trans-Mississippi—Charles Coe, Oklahoma City	
National Collegiate—Rick Jones, Ohio State	
U. S. Public Links—James H. Buxbaum, Memphis, Tenn.	
U. S. G. A. Seniors—Fred Wright, Watertown, Mass.	
U. S. Junior—Harlan Stevenson, Long Beach, Calif.	

## Women

U. S. Open—Mrs. Katherine McKinnon Cornellius, Lake Worth, Fla.....	(a) 302
Western Open—Beverly Hanson, Apple Valley, Calif.....	304
Titleholders—Louise Suggs, Sea Island, Ga....	302
Triangle Round Robin—Mrs. Marlene Bauer Hagge, Asheville, N. C.....	50 pts.
Babe Zaharias Open—Mrs. Marlene Bauer Hagge.....	219
P. G. A.—Mrs. Marlene Bauer Hagge	

(a) Defeated Barbara McIntire, Toledo, Ohio, 75 to 82, in 18-hole playoff.

## Amateur

U. S.—Marlene Stewart, Fonthill, Ont., defeated Jo Anne Gunderson, Seattle, Wash., 2 and 1, in final	
British—Margaret (Wiffi) Smith, St. Clair, Mich.	
Western—Ann Quast, Everett, Wash.	
Eastern—Mrs. Norman Woolworth, Darien, Conn.	
Southern—Mary Ann Downey, Baltimore, Md.	
Trans-Mississippi—Margaret Smith	
Canadian—Marlene Stewart	
National Intercollegiate—Marlene Stewart, Rollins	
U. S. Junior—Jo Anne Gunderson	

## TAM O'SHANTER

World Open—Ted Kroll.....	273
All-American Open—Dutch Harrison, St. Louis	278
World Amateur—Ward Wettlaufer, Buffalo, N. Y.....	290
All-American Amateur—James Hiskey, Houston.....	296

## WOMEN

World Open—Mrs. Marlene Bauer Hagge.....	298
All-American Open—Louise Suggs.....	301
World Amateur—Anne Richardson, Columbus, Ohio.....	309
All-American Amateur—Wanda Sanches, Baton Rouge, La.....	315

## Team

Curtis Cup (women)—Great Britain 5, U. S. 4, at Sandwich, England	
Hopkins Trophy—U. S. 21, Canada 6, at Fort Worth, Texas	
National Collegiate—U. of Houston	

## Other P. G. A. Winners

Los Angeles Open—Lloyd Mangrum, Apple Valley, Calif.	
Bing Crosby Invitation—Cary Middlecoff, Dallas	
Caliente Open—Mike Souchak, Grossinger, N. Y.	
Thunderbird Invitation—Jimmy Demaret, Klamasha Lake, N. Y.	
Imperial Valley Open—Paul O'Leary, Bismarck, N. D.	
Phoenix Open—Cary Middlecoff	
Tucson Open—Ted Kroll	
Texas Open—Gene Littler, Palm Springs, Calif.	
Houston Open—Ted Kroll	
Baton Rouge Open—Shelly Mayfield, Jericho, N. Y.	
Pensacola Open—Don Fairfield, Casey, Ill.	
St. Petersburg Open—Mike Fetchik, Mahopac, N. Y.	
Seminole Pro-Amateur—Walter Burkemo, Franklin, Mich.	
Miami Beach Open—Gardner Dickinson Jr., Panama City Beach, Fla.	
Azalea Open—Mike Souchak	
Greensboro Open—Sam Snead, White Sulphur Springs, W. Va.	
Arlington Hotel Open—Billy Maxwell, Odessa, Texas	
Carlings Open—Dow Finsterwald, Bedford Heights, Ohio	
Kansas City Open—Bo Wininger, Oklahoma City	
Dallas Centennial—Don January, Abilene, Texas	
Texas Int'l. Open—Peter Thomson	
Palm Beach round-robin—Gene Littler	
Philadelphia News Open—Dick Mayer, St. Petersburg, Fla.	
Insurance City Open—Arnold Palmer	
Labatt's Open—Bill Casper, Chula Vista, Calif.	
Miller High Life Open—Ed Furgol, St. Louis	
St. Paul Open—Mike Souchak	
Motor City Open—Bob Rosburg, Palo Alto, Calif.	
Rubber City Open—Ed Furgol	
Fort Wayne Open—Art Wall Jr., Pocono Manor, Pa.	
Oklahoma City Open—Fred Hawkins, El Paso, Texas	
San Diego Open—Bob Rosburg	

## INTERNATIONAL GOLF ASSOCIATION

(At Wentworth, England)

Canada Cup—1, U. S. (Ben Hogan 277, Sam Snead 290); 2, South Africa; 3, Canada; 4, England and Japan (tie)	
International Trophy—Ben Hogan	

## Y.M.C.A. CHAMPIONS

Source: Dr. Harold T. Friermood, Secretary, Health and Physical Education, National Council of the Y.M.C.A.'s.

Basketball—Toledo (Ohio) Central	
Swimming—Dayton, Ohio	
Weightlifting—Berkeley, Calif.	

## WRESTLING

Free Style—New Brunswick, N. J.	
Greco-Roman—New Brunswick, N. J.	

## GYMNASTICS

Individual all-around—John Pesha, West Side, New York City	
Team—Germantown, Pa.	

## FOUR-WALL HANDBALL

Singles—Jim Jacobs, San Pedro, Calif.	
Doubles—John Sloan-Phil Collins, Irving Park, Chicago	
Junior singles—Morris Singer, San Pedro, Calif.	
Junior doubles—Morris Singer-Jim Jacobs, San Pedro, Calif.	

## VOLLEYBALL

Senior—Hollywood (Calif.) Stars	
Masters—Embarcadero, San Francisco	

## BOYS ATHLETIC ACHIEVEMENT

Individual—Charles Snyder, York, Pa.	
Team—Covington, Ky.	

## WATER POLO

## National A. A. U. Champions

Outdoors—New York A. C.	
Indoors—Illinois A. C.	

# RIFLE AND PISTOL SHOOTING

Source: Paul B. Cardinal, Public Relations Director, National Rifle Association of America.

## National Champions

### OUTDOOR

#### Rifle

Smallbore—J. Kenneth Johnson, Washington, Pa.	6385-478x
Highpower—Sgt. 1st/C Lloyd G. Crow Jr., U. S. Army	642-82v
Highpower—Sgt. James E. Hill, U. S. Marine Corps	634-60v
Women's smallbore—Viola Pollum, Brookville, Pa.	6375-447x
Women's highpower—Marlene E. Bellinger, Seattle, Wash.	627-49v
Women's highpower—Ruth I. Sawyer, Dayton, Ohio	576-24v
Civilian highpower—Martin J. Hull, Orange, Calif.	635-74v
Civilian highpower—Leslie E. Stephenson, San Jose, Calif.	616-46v
Junior smallbore—Thomas R. Holm, Des Moines, Iowa	6363-398x
Junior highpower—Middleton Tompkins, Long Beach, Calif.	623-61v
Junior highpower—Margaret W. Long, Washington, D. C.	569-29v
NRA Match Rifle. bM-1 Service Rifle.	

#### Pistol

Men—M/Sgt. Huelet Benner, U. S. Army	2610
Women—Gertrude Backstrom, Hoquiam, Wash.	2528
Civilian—Richard C. Amundsen, Roy, Wash.	2549
Police—Presley A. O'Gron, El Paso, Texas.	2578

### NATIONAL TROPHY MATCHES

Individual rifle—S/Sgt. V. D. Mitchell, U. S. Marine Corps	242-20v
Team rifle—U. S. Marine Corps (W. E. Hall, R. W. Reant, E. H. Eckman, P. G. Gerdes, J. E. Hill, M. L. Darling)	1428-111v
Individual pistol—1st Lt. William W. McMillan, U. S. Marine Corps	291
Team pistol—U. S. Marine Corps—D. W. Henry, D. D. Thorne, R. O. Jones, R. E. Martin	1121

### INDOOR

#### Smallbore Rifle

Men—Barry R. Trew, Bentleyville, Pa.	792
Women—Marlene E. Bellinger	785
Junior—David J. Pullen, Howe, Ind.	198
Intercollegiate—Richard T. Dixon, U. C. L. A.	296
Team—Frazier-Simplex Club, Washington, Pa. (Earl L. Taylor, Michael Eddy, Barry Trew, George W. McCreight)	1577
Junior team—Frazier-Simplex Club (Barry Trew, Harry Malik Jr., George McCreight, Robert Hamilton)	759
Intercollegiate team—Nevada (Charles M. Taylor, Richard L. Mills, William F. Rusk, Terrance L. Katzer, Maxwell K. Botz)	1443

#### Pistol

Men—Albert A. Suarez, San Jose, Calif.	866
Women—Gertrude Backstrom	838
Team—Hopedale (Mass.) P. & R. Club (Alvis Bouquet, James Kuekan, Victor Person, Maurice Garvais)	1130

### British Win Tuna Cup

The British Commonwealth team won the International Tuna Cup match in 1956. Second in the competition at Wedgeport, Nova Scotia, was Argentina. Germany was third, the United States fourth.

## MOTORBOATING

### Major Trophy Winners

Harmsworth Trophy—Shanty I, Russell Schlech, driver; W. T. Waggoner Jr., Phoenix, Ariz., owner	
Presidents Cup—Miss Thriftway, Bill Muncey, driver; Willard Rhodes, Seattle, Wash., owner	
Seafair Trophy—Shanty I	
Silver Cup—Miss U. S. II, Don Wilson, driver; George Simon, Grosse Pointe Farms, Mich., owner	
International Cup—Gale VI, Lee Schoenith, driver; Joseph Schoenith, Detroit, owner	

### National Champions

#### INBOARD

Unlimited—W. T. Waggoner Jr., Phoenix, Ariz.	
7-litre—B. G. Bartley, Pittsburgh, Pa.	
266 hydro—William Ritner Sr., Camden, N. J.	
225 hydro—Mac Wiefering, Dayton, Ohio	
135 hydro—Frank Neely, El Monte, Calif.	
48 hydro—Jack Colcock, Cambridge, Md.	
44 run—Robert Mutchler, Seattle, Wash.	
B racing runabout—Ernie Rose, Paterson, Calif.	
E rac run—Ed Brown, Sacramento, Calif.	
E service runabout—Harry Bickford, Hampton, Va.	
F ser run—Forest Johnson, Miami, Fla.	
Crackerbox—Carl Maginn, Glendale, Calif.	
Jersey speed skiff—Bernard Tool Jr., Beach Haven, N. J.	

#### STOCK OUTBOARD

JU runabout—Billy Schumacher, Seattle, Wash.	
AU run—Dean Chenoweth, Xenia, Ohio	
BU run—David Kough, Hawthorne, N. J.	
CU run—Jon M. Culver, Dayton, Ohio	
DU run—John Jackson, Cincinnati, Ohio	
36 class—Ed Branding, Lake Villa, Ill.	
A stock hydro—Dean Chenoweth	
BSH—David Kough	
CSH—William G. McClung, Portsmouth, Va.	
DSH—William A. Holloway, Monroe, Mich.	

## TRAPSHOOTING

### Grand American Handicap

(At Vandalia, Ohio, Aug. 24)

Men—C. W. Brown, Dayton, Ohio	*99
Women—Mrs. Louis Wolf, Philadelphia	97
Junior—John B. Cottrell, Wilmington, Del.	*94
Professional—Tom Frye, Maumee, Ohio	*94

\* Won title in shoot-off.

### U. S. Championships

(At Pelham Manor, N. Y., May 11-13)

Men—Wait Ostrom, Orangeburg, N. Y.	*198
Women—Mrs. Leona Hard, Brookhaven, N. Y.	91
Doubles—M. D. Clark, Woodbury, Conn.	97
Handicap—Dr. Harry Whitford, Mountain View, N. J.	97
Junior—Nick Egan, Flushing, N. Y.	185
Senior—J. J. McHale Sr., London, Ont.	93

\* Won title in shoot-off.

### SKEET SHOOTING

#### National Championships

(At Reno, Nev., Aug. 5-11)

#### OPEN EVENTS

All-around—Titus H. Harris Jr., Galveston, Texas	542 x 550
All gauge—Jack Horner, San Francisco	250 x 250
Western—Jack Horner	100 x 100
Eastern—Jack Horner	100 x 100
20 gauge—Louis Gordon, Texarkana, Ark.	99 x 100
Small gauge—C. J. Crites, Detroit	99 x 100
Sub-small gauge—Ed C. Calhoun, Salisbury, Md.	98 x 100

#### SPECIAL EVENTS (ALL GAUGE)

Champion of champions—K. L. Prendergras, Jacksonville, Fla.	100 x 100
Collegiate—Jack Horner, U. of California	250 x 250

#### WOMEN

All-around—Mrs. Leon Mandel, Chicago	526 x 550
All gauge—Mrs. Leon Mandel	247 x 250
20 gauge—Mrs. Leon Mandel	96 x 100
Small gauge—Judy Allen, Oakland, Calif.	97 x 100
Sub-small gauge—Mrs. Fred Alford Sr., Dallas, Texas	96 x 100



## MAJOR LEAGUE BASEBALL RECORDS FOR 1956

## National League

## Final Standing of the Clubs

	Brooklyn	Milwaukee	Cincinnati	St. Louis	Philadelphia	New York	Pittsburgh	Chicago	Won	Lost	Percentage	Games Behind
Brooklyn	—	10	11	16	13	14	13	16	93	61	.604	—
Milwaukee	12	—	13	13	10	17	14	13	92	62	.597	1
Cincinnati	11	9	—	13	11	14	17	16	91	63	.591	2
St. Louis	6	9	9	—	10	15	14	13	76	78	.494	17
Philadelphia	9	12	11	12	—	11	7	9	71	83	.461	22
New York	8	5	8	7	11	—	13	15	67	87	.435	26
Pittsburgh	9	8	5	8	15	9	—	12	66	88	.429	27
Chicago	6	9	6	9	13	7	10	—	60	94	.390	33

## American League

## Final Standing of the Clubs

	New York	Cleveland	Chicago	Boston	Detroit	Baltimore	Washington	Kansas City	Won	Lost	Percentage	Games Behind
New York	—	12	13	14	10	13	17	18	97	57	.630	—
Cleveland	10	—	7	9	11	17	17	17	88	66	.571	9
Chicago	9	15	—	8	13	13	14	85	69	552	12	12
Boston	8	13	14	—	12	16	9	12	84	70	.545	13
Detroit	12	11	9	10	—	9	15	16	82	72	.532	15
Baltimore	9	5	9	6	13	—	12	15	69	85	.448	28
Washington	5	5	9	13	7	10	—	10	59	95	.383	38
Kansas City	4	5	8	10	6	7	12	—	52	102	.338	45

## THE LEADERS

## National League

Batting—Henry Aaron, Milwaukee	328
Runs batted in—Stan Musial, St. Louis	109
Hits—Henry Aaron, Milwaukee	200
Doubles—Henry Aaron, Milwaukee	34
Triples—Bill Bruton, Milwaukee	15
Home runs—Duke Snider, Brooklyn	43
Runs—Frank Robinson, Cincinnati	122
Stolen bases—Willie Mays, New York	40
Pitching—Don Newcombe, Brooklyn (W 27, L 7)	.794
Strikeouts—Sam Jones, Chicago	176

## American League

Batting—Mickey Mantle, New York	356
Runs batted in—Mickey Mantle, New York	130
Hits—Harvey Kuenn, Detroit	196
Doubles—Jim Piersall, Boston	40
Triples—Jackie Jensen, Boston; Minnie Minoso, Chicago; Harry Simpson, Kansas City, and Jim Lemon, Washington (tie)	11
Home runs—Mickey Mantle, New York	52
Runs—Mickey Mantle, New York	132
Stolen bases—Luis Aparicio, Chicago	20
Pitching—Whitey Ford, New York (W 19, L 6)	.760
Strikeouts—Herb Score, Cleveland	263

## MINOR LEAGUE BASEBALL

## JUNIOR WORLD SERIES

Indianapolis (A. A.) beat Rochester (I. L.), 4 games to 0.

## DIXIE SERIES

Houston (T. L.) beat Atlanta (S. A.), 4 games to 2.

## 1956 Pennant Winners

## OPEN CLASSIFICATION

League and champion	Play-off winner
League and champion	Play-off winner
Pacific Coast—Los Angeles	No play-offs

## CLASS AAA

American Assn.—Indianapolis	Indianapolis
International—Toronto	Rochester

## CLASS AA

Mexican—Mexico City Reds	No play-offs
Southern—Atlanta	Atlanta
Texas—Houston	Houston

## CLASS A

Schenectady	Schenectady
South Atlantic—Jacksonville	Jacksonville
Western—Lincoln (1st half), Amarillo (2d half)	Lincoln

## CLASS B

Big State—Corpus Christi	Port Arthur
Carolina—High Point-Thomasville	Fayetteville
Northwest—Yakima (both halves)	No play-offs
Southwestern—Hobbs	El Paso
Three-I—Evansville (both halves)	No play-offs

## CLASS C

Arizona-Mexico—Cananea (1st half), Yuma (2d half)	Cananea
California—Fresno	Fresno
Evangeline—Lafayette	(a) Play-offs unfinished
Mexican Central—Saltillo	No play-offs
Northern—Eau Claire	Duluth-Superior
Pioneer—Boise	No play-offs

## CLASS D

Alabama-Florida—Graceville	Donalsonville
Florida State—Cocoa (both halves)	No play-offs
Georgia-Florida—Valdosta (both halves)	No play-offs
Georgia State—Douglas (both halves)	Douglas
Midwest—Paris (1st half), Dubuque (2d half)	
Nebraska State—Lexington	No play-offs
Pony—Wellsville	Wellsville
Sooner State—Ardmore	Seminole

(a) Final playoff between Lafayette and Thibodaux was canceled.

## Other Baseball Champions

National Amateur Federation—Dossin's Pepsi-Cola, Detroit
American Legion—Fred W. Stockholm Post, St. Louis
American Amateur Congress—Tacoma, Wash.
Little League—Roswell, N. M.
Babe Ruth—Trenton, N. J.
Global (semi-pro) World Series—U. S. (Ft. Wayne, Ind.)
National Congress—Ft. Wayne, Ind., Dairymen
National Collegiate—Minnesota

Unofficial Averages

Source: Elias Baseball Bureau, New York City.

BATTING

National League

American League

	g	ab	r	h	hr	rbi	avg.
Aaron, Milwaukee.	153	609	106	200	26	93	.328
Virton, St. L.-Pitts.	157	580	76	185	10	46	.319
Clemente, Pittsburgh	147	543	67	169	7	60	.311
Musial, St. Louis.	156	594	87	184	27	109	.310
Boyer, St. Louis	150	595	91	182	26	98	.308
Ashburn, Philadelphia	154	628	94	190	3	48	.303
Klusewski, Cincinnati	138	517	91	156	35	102	.302
Schoendienst, New York	132	487	61	147	2	29	.302
Gilliam, Brooklyn	153	594	102	178	6	43	.300
Bailey, Cincinnati.	118	383	59	115	28	76	.300
Moon, St. Louis.	149	540	86	161	16	68	.298
Brandt, St. L.-N. Y.	125	393	54	117	12	49	.298
Banks, Chicago.	139	538	82	160	28	85	.297
Mays, New York.	152	578	101	171	36	84	.296
Bell, Cincinnati.	150	603	82	176	29	84	.292
Snider, Brooklyn.	151	542	112	158	43	101	.292
Adcock, Milwaukee.	137	454	76	132	38	103	.291
Robinson, Cincinnati.	152	572	122	166	38	83	.290
Furillo, Brooklyn	149	523	66	151	21	83	.289
Valo, Philadelphia.	98	291	40	84	5	36	.289
Hemus, St. L.-Phila.	82	192	24	55	6	26	.286
Temple, Cincinnati.	154	631	88	180	2	41	.285
Moryn, Chicago.	147	529	69	151	23	66	.285
Thomas, Pittsburgh.	157	588	69	166	25	80	.282
Smith, St. Louis.	75	227	27	64	6	22	.282
Logan, Milwaukee.	148	545	68	153	15	46	.281
Jones, Philadelphia	149	520	88	144	17	78	.277
Hepuski, St. Louis.	112	376	44	104	11	65	.277
Dark, N. Y.-St. L.	148	619	73	170	6	54	.276
Robinson, Brooklyn.	118	357	61	98	10	43	.275
Burress, Cincinnati.	90	229	29	63	12	39	.275
Walls, Pittsburgh.	143	474	72	130	11	54	.274
Jackson, Brooklyn.	101	307	38	84	8	53	.274
Groat, Pittsburgh.	142	520	40	142	0	37	.273
Mathews, Milwaukee.	151	552	103	150	37	95	.272
Bruton, Milwaukee.	147	525	73	143	8	56	.272
Irvin, Chicago.	111	339	45	92	15	52	.271
Fondy, Chicago.	137	543	62	146	9	44	.269
Mueller, New York.	138	453	38	122	5	41	.269
Lopata, Philadelphia.	147	535	96	143	38	95	.267
Hodges, Brooklyn.	153	550	85	146	32	87	.266
Long, Pittsburgh.	145	517	64	136	27	91	.263
McMillan, Cincinnati.	150	480	61	126	3	61	.263
Blasingame, St. Louis.	150	587	94	153	0	27	.261
Ennis, Philadelphia.	153	630	80	164	26	95	.260
Lockman, N. Y.-St. L.	118	362	57	94	1	19	.260
Ammos, Brooklyn.	114	292	23	76	16	58	.260
Baker, Chicago.	140	546	65	141	12	57	.258
Reese, Brooklyn.	147	572	85	147	9	46	.257
White, New York.	138	508	63	130	22	59	.256
Jablonski, Cincinnati.	130	407	42	104	15	67	.256
Drake, Chicago.	65	215	29	55	2	15	.256
Blaylock, Philadelphia.	135	460	61	117	10	45	.254
Sarni, St. L.-N. Y.	124	386	28	98	10	45	.254
Pest, Cincinnati.	143	439	93	134	36	83	.251
King, Chicago.	118	317	33	79	15	55	.249
Katt, N. Y.-St. L.	84	259	21	64	13	34	.247
Mazeroski, Pittsburgh.	81	265	30	62	3	14	.243
Shepard, Pittsburgh.	100	298	24	62	7	30	.242
O'Connell, Milwaukee.	139	498	71	119	2	42	.239
Miksis, Chicago.	114	356	53	85	9	27	.239
Whisenant, Chicago.	103	314	37	75	11	46	.239
Crandall, Milwaukee.	112	311	37	74	15	48	.238
Thomson, Milwaukee.	142	451	69	106	20	74	.235
Thompson, New York	82	183	23	43	8	29	.235
Castleman, New York	124	385	33	87	14	45	.228
Hamner, Philadelphia.	122	401	22	90	4	42	.224
Landrith, Chicago.	122	311	22	69	4	32	.222
Spencer, New York.	146	488	46	108	14	42	.221
Campanella, Brooklyn	123	388	39	85	20	73	.219
Rhodes, New York.	111	243	20	53	8	32	.218
Hoak, Chicago.	121	424	51	91	5	37	.215
Del Greco, Pitt.-St. L.	116	291	31	62	7	21	.213
Freese, Pittsburgh.	65	207	17	44	3	13	.213
Rice, Milwaukee.	71	188	15	40	3	17	.213
Foiles, Pittsburgh.	79	222	24	47	7	24	.212
Chiti, Chicago.	72	203	17	43	4	19	.212
Kazanski, Philadelphia.	117	379	34	80	4	33	.211
Greengrass, Philadelphia.	86	215	24	44	6	25	.205
Skinner, Pittsburgh.	113	233	29	47	6	29	.202

	g	ab	r	h	hr	rbi	avg.
Mantle, New York.	150	533	132	188	52	130	.353
Williams, Boston.	136	400	71	138	24	82	.345
Kuenn, Detroit.	146	591	96	196	12	88	.332
Maxwell, Detroit.	141	500	97	163	28	87	.326
Nieaman, Chi.-Balt.	128	428	63	137	14	67	.320
Skizas, N. Y.-K. C.	89	303	39	97	11	40	.320
Mineo, Chicago.	151	545	108	172	21	99	.316
Jensen, Boston.	151	578	80	182	20	97	.316
Kaline, Detroit.	153	618	96	194	27	128	.314
McDougal, New York.	120	435	79	136	13	55	.311
Boyd, Baltimore.	70	225	28	70	2	12	.311
Runnels, Washington.	147	578	72	179	8	75	.310
Vernon, Boston.	119	403	67	125	15	84	.310
Power, Kansas City.	127	530	77	164	14	62	.309
Boone, Detroit.	131	480	77	148	25	81	.308
Skowron, New York.	133	464	78	143	23	90	.308
Courtney, Washington.	101	283	31	86	5	44	.304
Berra, New York.	143	521	93	155	30	105	.298
Fox, Chicago.	154	649	109	192	4	82	.296
Phillips, Detroit.	66	224	31	66	1	18	.295
Piersall, Boston.	155	601	91	176	14	87	.293
Simpson, Kansas City.	141	543	76	159	21	106	.293
Lollar, Chicago.	136	450	65	132	11	75	.293
Goodman, Boston.	105	399	61	117	2	38	.293
Gernert, Boston.	106	306	54	89	16	69	.291
Wilson, Detroit.	78	227	32	66	7	38	.291
Williams, Baltimore.	87	353	46	101	11	37	.286
Bolling, Detroit.	100	363	53	103	7	44	.284
Slaughter, K. C.-N. Y.	115	306	52	86	2	24	.283
Brando, Baltimore.	131	452	47	126	21	87	.279
Colavito, Cleveland.	101	322	55	89	21	65	.276
Smith, Cleveland.	141	526	87	144	16	71	.274
Lopez, Kansas City.	151	561	91	153	18	69	.273
Lemon, Washington.	146	538	77	147	27	96	.273
Thompson, Kansas City.	92	268	21	73	1	27	.272
Klaus, Boston.	135	520	92	141	7	57	.271
Keli, Chi.-Balt.	123	425	63	115	9	48	.271
Plews, Washington.	91	256	24	69	1	25	.270
Doby, Chicago.	140	504	89	135	24	102	.269
Aparicio, Chicago.	152	533	69	142	3	56	.266
Rosen, Cleveland.	121	417	64	111	15	61	.266
Smith, Balt.-K. C.	113	368	31	98	4	42	.265
Dropo, Chicago.	123	358	42	95	8	51	.265
Wertz, Cleveland.	136	481	65	127	32	106	.264
Martin, New York.	121	458	76	121	9	49	.264
Howard, New York.	98	289	35	76	5	34	.263
Torgeson, Detroit.	117	318	61	83	12	42	.261
Woodling, Cleveland.	100	318	56	83	8	38	.261
Berberet, Washington.	95	208	25	54	4	27	.260
Francona, Baltimore.	139	445	62	115	9	57	.258
Groth, Kansas City.	95	244	21	63	3	37	.258
Lepcio, Boston.	82	284	33	73	15	68	.257
Hoffield, Det.-Chi.	113	340	43	87	7	35	.256
Rivers, Chicago.	139	441	76	125	12	66	.255
Sievers, Washington.	152	549	92	139	29	95	.253
Tuttle, Detroit.	140	547	61	138	9	64	.252
Pilarcik, Kansas City.	69	239	29	60	4	22	.251
Phillie, Balt.-Chi.	118	393	67	98	5	64	.249
White, Boston.	114	390	28	96	5	44	.246
Olson, Washington.	106	313	34	77	4	22	.246
Herzog, Washington.	117	421	49	103	4	35	.245
Bauer, New York.	147	539	96	130	26	83	.241
Carrasquel, Cleveland.	141	474	60	114	7	47	.241
Velasco, Washington.	90	246	18	59	4	29	.240
Buddin, Boston.	114	377	49	90	5	36	.239
Hale, Baltimore.	85	207	18	49	1	24	.237
Carey, New York.	132	423	54	100	7	50	.236
Busby, Cleveland.	135	494	72	116	12	49	.235
Gardner, Baltimore.	144	511	63	119	11	50	.233
Yost, Washington.	152	511	94	119	11	53	.233
DeMaestri, Kansas City.	133	435	41	101	6	39	.232
Collins, New York.	100	262	38	69	7	42	.225
Avila, Cleveland.	138	514	74	115	10	54	.224
Zernial, Kansas City.	109	272	38	61	16	44	.224
Ginsberg, K. C.-Balt.	81	223	15	47	1	25	.224
Hegan, Cleveland.	122	315	42	70	6	34	.222
Minnard, Baltimore.	148	461	38	100	2	35	.217
Finigan, Kansas City.	91	250	29	54	2	21	.215
Robinson, N. Y.-K. C.	101	228	20	48	7	23	.202

CLUB BATTING

	g	r	h	hr	rbi	sb	avg.	shut out
St. Louis.	156	678	1443	124	629	38	.269	11
Cincinnati.	155	775	1405	221	732	44	.266	5
Milwaukee.	155	709	1350	177	666	25	.259	7
Brooklyn.	154	720	1315	110	647	24	.257	10
Pittsburgh.	157	688	1403	121	610	43	.252	5
Philadelphia.	154	668	1312	121	610	43	.252	5
New York.	154	640	1268	145	489	65	.244	10
Chicago.	157	698	1280	142	660	61	.243	15

	g	r	h	hr	rbi	sb	avg.	shut out
Detroit.	155	789	1493	150	742	42	.283	6
Boston.	155	780	1473	139	749	28	.276	4
New York.	154	857	1430	190	784	49	.270	8
Chicago.	154	776	1412	128	721	66	.267	4
Kansas City.	154	619	1325	111	682	38	.262	14
Washington.	155	652	1302	112	608	35	.250	16
Cleveland.	155	712	1257	163	877	39	.244	8
Baltimore.	154	572	1242	91	515	39	.244	10

## PITCHING RECORDS

## National League

	g	ip	h	bb	so	w	l	era
Drysdale, Brooklyn.....	25	99	95	31	65	6	2	6.64
Burdette, Milwaukee.....	39	256	235	52	107	19	10	2.79
Antonelli, New York.....	41	258	227	74	147	20	13	2.71
Spahn, Milwaukee.....	39	281	249	52	126	20	11	2.79
Maglie, Brooklyn.....	28	191	154	60	109	13	5	2.92
Newcombe, Brooklyn.....	38	268	219	46	138	27	7	3.06
Conley, Milwaukee.....	31	158	169	52	68	8	9	3.13
Rush, Chicago.....	32	240	204	59	103	13	10	3.19
Buhl, Milwaukee.....	38	218	191	102	85	18	8	3.30
Dickson, Phil.-St. L.....	31	219	195	69	109	13	11	3.33
McDaniel, St. Louis.....	39	116	121	42	57	7	6	3.34
Labine, Brooklyn.....	62	116	111	39	75	10	6	3.34
Simmons, Philadelphia.....	33	198	186	65	85	15	10	3.36
Freeman, Cincinnati.....	64	109	111	35	46	14	6	3.39
Kline, Pittsburgh.....	44	264	263	83	124	14	18	3.41
R. Miller, Philadelphia.....	43	121	114	33	60	3	6	3.42
Friedman, Pittsburgh.....	49	315	309	85	164	17	17	3.46
Face, Pittsburgh.....	68	135	131	41	96	12	13	3.53
Lown, Chicago.....	61	111	95	78	70	9	8	3.57
Kaiser, Chicago.....	27	151	144	52	74	4	9	3.58
Davis, Chicago.....	46	120	117	69	66	5	7	3.60
Mizell, St. Louis.....	33	209	172	91	153	14	14	3.62
Haddix, St. L.-Phila.....	35	230	224	64	170	13	8	3.64
Poholsky, St. Louis.....	33	202	198	44	95	9	14	3.65
Valentinetti, Chicago.....	42	95	83	36	26	6	4	3.70
Craig, Brooklyn.....	35	199	169	87	108	12	11	3.71
Nuxhall, Cincinnati.....	44	201	196	87	122	13	11	3.72
Whehmer, Phil.-St. L.....	37	191	167	82	75	12	11	3.72
Brannan, Chicago.....	30	95	95	45	49	6	9	3.79
Crone, Milwaukee.....	35	172	174	43	71	11	10	3.82
Jeffcoat, Cincinnati.....	38	171	188	56	55	8	2	3.84
Schmidt, St. Louis.....	33	148	131	78	54	6	8	3.89
Jones, Chicago.....	33	189	155	116	76	9	14	3.91
Worthington, New York.....	28	166	154	73	93	7	14	3.96
Hearn, New York.....	30	129	124	44	66	5	11	3.98
Lawrence, Cincinnati.....	49	219	210	71	96	19	10	3.99
Munger, Pittsburgh.....	35	106	126	41	46	3	4	4.04
Klopfer, Cincinnati.....	45	178	193	35	86	11	11	4.05
Filipowstein, Cincinnati.....	37	211	219	82	83	12	11	4.09
Bray, Brooklyn.....	41	186	185	57	97	11	11	4.26
Law, Pittsburgh.....	39	196	216	49	59	8	16	4.36
Meyer, Philadelphia.....	41	96	86	53	65	7	11	4.41
Roberts, Philadelphia.....	43	298	327	40	158	19	18	4.44
Littlefield, Pitt.-St. L.-N. Y.....	40	119	101	51	80	4	6	4.46
S. Miller, St. L.-Phila.....	27	114	121	55	58	5	9	4.60
Gomez, New York.....	40	196	191	78	76	7	17	4.69
Hacker, Chicago.....	34	168	189	44	61	3	13	4.66
Rogovin, Philadelphia.....	22	107	122	27	48	7	6	4.96

## American League

Ford, New York.....	31	226	187	84	141	19	6	2.47
Score, Cleveland.....	35	249	162	129	263	20	9	2.57
Wynn, Cleveland.....	38	278	233	91	156	20	9	2.80
Burnette, Kansas City.....	18	121	115	38	121	11	5	2.90
Staley, N. Y.-Chi.....	27	102	101	20	24	8	3	3.00
Lemon, Cleveland.....	39	255	230	88	96	20	14	3.04
Harshman, Chicago.....	34	227	183	102	143	15	11	3.09
Lary, Detroit.....	41	294	289	115	164	21	13	3.12
Larsen, New York.....	38	179	133	96	103	11	6	3.27
Pierce, Chicago.....	35	276	261	101	192	20	9	3.33
Johnson, Chi.-Balt.....	31	196	176	69	137	9	11	3.35
Sturdivant, New York.....	32	158	134	52	111	16	8	3.36
Byrne, New York.....	37	110	108	72	61	7	3	3.36
Sullivan, Boston.....	34	242	253	82	114	7	3	3.42
Brewer, Boston.....	32	245	201	112	126	19	9	3.49
Truck, Detroit.....	22	119	104	63	42	8	5	3.55
Foytack, Detroit.....	43	256	211	142	183	15	13	3.59
Stobbs, Washington.....	37	240	264	64	98	15	15	3.64
Donovan, Chicago.....	34	235	212	60	114	12	10	3.64
Garcia, Cleveland.....	35	198	213	74	120	11	12	3.77
Parnell, Boston.....	21	131	129	59	40	7	6	3.85
Kucks, New York.....	34	224	223	72	67	18	9	3.86
Gorman, Kansas City.....	52	171	168	69	55	9	10	3.90
Brown, Baltimore.....	35	152	145	37	58	9	7	4.03
Nixon, Boston.....	23	145	145	58	74	9	8	4.03
Keegan, Chicago.....	20	105	120	35	32	6	7	4.03
Light, Baltimore.....	35	175	198	81	86	9	12	4.06
Wright, Detroit.....	38	242	277	104	165	20	14	4.08
Fernandez, Chi.-Balt.....	38	246	231	80	60	4	8	4.14
Delock, Boston.....	48	128	121	80	112	12	7	4.15
Moore, Baltimore.....	32	185	162	99	104	12	7	4.15
Gromek, Detroit.....	40	142	142	47	63	8	6	4.18
Shantz, Kansas City.....	45	104	94	36	66	2	7	4.24
Palica, Baltimore.....	29	117	117	52	62	4	11	4.31
Wilson, Balt.-Chi.....	35	208	197	87	117	13	14	4.33
Ditmar, Kansas City.....	44	256	254	108	112	22	22	4.36
Sisler, Boston.....	39	142	109	72	91	9	8	4.56
Turley, New York.....	27	132	138	103	91	8	4	4.91
Kretlow, Kansas City.....	25	120	124	74	60	4	9	5.03
Ferrareso, Baltimore.....	36	102	86	64	84	4	10	5.03
Flanore, Washington.....	37	153	178	75	52	12	10	5.18
Porterfield, Boston.....	25	125	127	64	52	3	12	5.26
Stewart, Washington.....	39	189	194	82	37	6	7	5.57
Pascual, Washington.....	39	189	194	82	37	6	7	5.57
Crimian, Kansas City.....	54	125	126	61	59	8	6	5.86
Stone, Washington.....	41	132	148	93	86	6	6	5.90
Wiesler, Washington.....	36	122	141	112	46	3	12	6.49
Herriage, Kansas City.....	31	103	136	64	56	1	13	6.64

## 1956 World Series

## 1st Game—at Brooklyn, Oct. 3

NEW YORK (A)					BROOKLYN (N)				
ab	r	h	e	r	ab	r	h	e	r
Bauer, rf.....	5	0	2		Gilliam, 2b.....	3	0	0	
Slaughter, lf.....	6	1	3		Reese, ss.....	4	1	2	
Mantle, cf.....	3	1	1		Snider, cf.....	3	1	1	
Berra, c.....	3	0	0		Robinson, 3b.....	4	1	1	
Skowron, 1b.....	4	0	0		Hodges, 1b.....	4	2	2	
McDougald, ss.....	4	0	0		Furillo, rf.....	4	0	1	
Martin, 2b, 3b.....	3	1	1		Campanella, c.....	4	0	1	
Carey, 3b.....	3	0	1		Amoros, lf.....	3	0	1	
cCollins.....	1	0	0		Maglie, p.....	3	0	0	
Turley, p.....	0	0	0						
Ford, p.....	1	0	0		Totals.....	32	6	9	
aWilson.....	1	0	0						
Kucks, p.....	0	0	0						
bCerv.....	1	0	0						
Morgan, p.....	0	0	0						
dByrne.....	1	0	0						
G. Coleman, 2b.....	0	0	0						
Totals.....	35	3	9						

aStruck out for Ford in 4th. bSingled for Kucks in 6th. cStruck out for Carey in 8th. dFouled out for Morgan in 8th.

New York..... 2 0 0 1 0 0 0 0 0-3  
Brooklyn..... 0 2 3 1 0 0 0 0 x-6

E—Skowron. RBI—Mantle 2, Robinson, Furillo, Hodges 3, Martin, Amoros. 2B—Furillo, Campanella. HR—Mantle, Robinson, Hodges, Martin. SB—Gilliam. DP—Skowron-McDougald-Martin; Gilliam-Reese-Hodges. LOB—New York 9, Brooklyn 4. BB, off—Maglie 4 (Berra, Mantle 2, Martin); Morgan 2 (Gilliam, Snider). SO, by—Maglie 10 (Skowron, McDougald 3, Carey, Ford, Mantle, Wilson, Collins, Bauer); Ford 1 (Maglie); Kucks 1 (Reese); Turley 2 (Hodges, Campanella). H, off—Ford 6 in 3 innings; Kucks 2 in 2, Morgan 1 in 2, Turley 0 in 1. R&ER, off—Ford 5-5, Kucks 1 & 1, Maglie 3 & 3. LP—Ford.

Umpires—Pinelli (N), plate; Soar (A), 1b; Boggess (N), 2b; Napp (A), 3b; Gorman (N), lf; Runge (A), rf. Time—2:32. Paid attendance—34,479.

## 2d Game—at Brooklyn, Oct. 5

NEW YORK (A)					BROOKLYN (N)				
ab	r	h	e	r	ab	r	h	e	r
McDougald, ss.....	3	0	1		Gilliam, 2b.....	3	1	1	
Slaughter, lf.....	4	3	2		Reese, ss.....	6	1	1	
Mantle, cf.....	4	1	1		Snider, cf.....	4	3	2	
Berra, c.....	4	1	2		Robinson, 3b.....	4	2	2	
Collins, 1b.....	4	0	1		Hodges, 1b.....	3	2	3	
Bauer, rf.....	5	0	1		Amoros, lf.....	4	1	0	
Martin, 3b, 2b.....	4	1	1		dJackson.....	1	0	0	
G. Coleman, 2b.....	2	0	0		Climoli, lf.....	0	0	0	
dSkowron.....	1	0	0		Furillo, rf.....	4	2	2	
Carey, 3b.....	1	0	0		Campanella, c.....	3	1	2	
Larsen, p.....	0	0	0		Newcombe, p.....	0	0	0	
Kucks, p.....	0	0	0		Roebuck, p.....	0	0	0	
Byrne, p.....	0	0	0		aMitchell.....	1	0	0	
Sturdivant, p.....	0	0	0		Bessent, p.....	2	0	1	
Morgan, p.....	1	1	1		Totals.....	35	13	12	
Turley, p.....	0	0	0						
bSiebern.....	1	0	0						
McDermott, p.....	1	0	1						
Totals.....	35	8	12						

aFouled out for Roebuck in 2d. bFlied out for Turley in 6th. cStruck out for Amoros in 7th. dStruck out for G. Coleman in 8th.

New York..... 1 5 0 1 0 0 0 0 1-8  
Brooklyn..... 0 6 1 2 2 0 0 2 x-13

E—Collins, Bauer. RBI—Collins 2, Larsen, Berra 4, Campanella, Reese 2, Snider 3, Bessent, Slaughter, Hodges 4, Gilliam 4. LOB—New York 7, Brooklyn 11. BB, off—Newcombe 2 (Berra, Mantle); Bessent 2 (Collins, McDougald); Larsen 4 (Gilliam 2, Snider, Furillo); Sturdivant 2 (Hodges, Gilliam); Morgan 2 (Campanella, Snider); McDermott 3 (Bessent, Robinson, Hodges). SO, by—Bessent 4 (Mantle, Martin 2, Skowron); Byrne 1 (Robinson); Sturdivant 2 (Amoros, Campanella); Morgan 3 (Amoros, Bessent, Gilliam); Turley 1 (Amoros); McDermott 3 (Snider 2, Jackson). H, off—Newcombe 6 in 1 2/3 innings, Roebuck 0 in 1/3, Kucks 1 in 0 (faced one batter in 2d). Byrne 1 in 1/3, Sturdivant 2 in 2/3, Morgan 5 in 2, Turley 0 in 1/3, McDermott 2 in 1. R&ER, off—Newcombe 6-6, Larsen 4-0, Kucks 1-0, Byrne 1-0, Sturdivant 1-1, Morgan 4-4, McDermott 2-1, Bessent 2-2. WP—Bessent. LP—Morgan.

Umpires—Soar (A), plate; Boggess (N), 1b; Napp (A), 2b; Pinelli (N), 3b; Runge (A), lf; Gorman (N), rf. Time—3:26. Paid attendance—36,217.



## 3d Game—at New York, Oct. 6

BROOKLYN (N)				NEW YORK (A)			
	ab	r	h		ab	r	h
Gilliam, lf.....	4	0	0	Bauer, rf.....	4	1	1
Reese, ss.....	4	1	2	Collins, 1b.....	4	1	0
Snider, cf.....	3	0	0	Mantle, cf.....	4	0	1
Robinson, 3b.....	3	1	1	Berra, c.....	4	1	2
Hodges, 1b.....	3	1	1	Slaughter, lf.....	3	1	2
Furillo, rf.....	4	0	2	Martin, 2b.....	4	1	1
Campanella, c.....	3	0	1	McDougald, ss.....	2	0	1
Neal, 2b.....	4	0	0	Carey, 3b.....	3	0	0
Craig, p.....	2	0	1	Ford, p.....	3	0	0
Jackson.....	1	0	0				
Labine, p.....	0	0	0	Totals.....	31	5	8
Totals.....	31	3	8				

aFiled out for Craig in 7th.

Brooklyn.....	0	1	0	0	0	1	1	0	0-3
New York.....	0	1	0	0	0	3	0	1	x-6
E—Carey, Neal. RBI—Campanella, Martin, Snider, Slaughter 3, Berra. 2B—Berra, Furillo. 3B—Reese. HR—Martin, Slaughter. SF—Campanella, Snider. DP—Martin—McDougald—Collins; Craig—Reese—Hodges; Neal—Reese—Hodges. LOB—Brooklyn 4, New York 4. BB, off—Ford 2 (Robinson, Hodges); Craig 1 (McDougald); Labine 1 (Slaughter). SO, by—Ford 7 (Reese, Snider 3, Furillo, Neal, Campanella, Craig); Craig 4 (Carey 2, Ford, Bauer); Labine 2 (Carey, Ford). H, off—Craig 7 in 6 innings, Labine 1 in 2. R&ER, off—Craig 4-4, Labine 1-0, Ford 3-2. LP—Craig.									

Umpires—Bogess (N), plate; Napp (A), 1b; Pinelli (N), 2b; Soar (A), 3b; Gorman (N), lf; Runge (A), rf. Time—2:17. Paid attendance—73,977.

## 4th Game—at New York, Oct. 7

BROOKLYN (N)				NEW YORK (A)			
	ab	r	h		ab	r	h
Gilliam, 2b.....	4	0	0	Bauer, rf.....	4	1	1
Reese, ss.....	4	0	1	Collins, 1b.....	3	1	1
Snider, cf.....	4	1	1	Mantie, cf.....	3	2	1
Hodges, 1b.....	3	1	1	Berra, c.....	4	0	1
Amoros, lf.....	3	0	0	Slaughter, lf.....	3	1	0
Furillo, rf.....	3	0	0	Martin, 2b.....	4	0	1
Campanella, c.....	2	0	2	McDougald, ss.....	2	0	0
Erskine, p.....	1	0	0	Carey, 3b.....	3	1	1
aWalker.....	1	0	0	Sturdivant, p.....	3	0	1
Roebuck, p.....	0	0	0	Totals.....	29	6	7
aMitchell.....	1	0	0				
Drysdale, p.....	0	0	0				
Jackson.....	1	0	0				
Totals.....	31	2	6				

aGrounded into double play for Erskine in 5th. aFiled out for Roebuck in 7th. Struck out for Drysdale in 9th.

Brooklyn.....	0	0	0	1	0	0	0	0	1-2
New York.....	1	0	0	2	0	1	2	0	x-6
E—Collins, Carey. RBI—Berra, Hodges, Martin, McDougald, Mantle. Bauer 2, Campanella. 2B—Collins, Snider, Robinson. HR—Mantie, Bauer. SB—Collins (unassisted); Martin—McDougald—Collins. LOB—Brooklyn 8, New York 3. BB, off—Sturdivant 6 (Gilliam, Robinson, Campanella 2, Amoros, Furillo); Erskine 2 (Mantie, Slaughter); Drysdale 1 (Collins). O, by—Sturdivant 7 (Reese 2, Hodges 2, Erskine, Snider, Jackson); Erskine 2 (Carey, Berra); Roebuck 2 (Bauer, Martin); Drysdale 1 (Sturdivant). H, off—Erskine 4 in 4 innings, Roebuck 1 in 2, Drysdale 2 in 2. R&ER, off—Erskine 3-3, Roebuck 1-1, Drysdale 2-2, Sturdivant 2-2. LP—Sturdivant.									

Umpires—Napp (A), plate; Pinelli (N), 1b; Soar (A), 2b; Bogess (N), 3b; Runge (A), lf; Gorman (N), rf. Time—2:43. Paid attendance—69,705.

## Long Homers in 8 Straight Games

Dale Long of the Pittsburgh Pirates hit home run in each of eight consecutive games in 1956 to break a major league record. The old mark of six had been set in 1922 and equaled a number of times. Long's streak began on May 19 and extended through May 28. He was held hitless by Don Newcombe of Brooklyn on May 29.

## Larsen Pitches 1st Series No-Hitter

Don Larsen of the New York Yankees, in the fifth game of the 1956 World Series, pitched not only the first no-hitter in the history of the series but he achieved the first perfect game achieved in the major leagues since 1922. Larsen retired 27 Brooklyn batters in a row, seven by strikeouts. His was the seventh perfect game in major league history.

## 5th Game—at New York, Oct. 8

BROOKLYN (N)				NEW YORK (A)			
	ab	r	h		ab	r	h
Gilliam, 2b.....	3	0	0	Bauer, rf.....	4	0	1
Reese, ss.....	3	0	0	Collins, 1b.....	4	0	1
Snider, cf.....	3	0	0	Mantie, cf.....	3	1	1
Robinson, 3b.....	3	0	0	Berra, c.....	3	0	0
Hodges, 1b.....	3	0	0	Slaughter, lf.....	2	0	0
Amoros, lf.....	3	0	0	Martin, 2b.....	3	0	1
Furillo, rf.....	3	0	0	McDougald, ss.....	2	0	0
Campanella, c.....	3	0	0	Carey, 3b.....	3	1	1
Maglie, p.....	2	0	0	Larsen, p.....	2	0	0
aMitchell.....	1	0	0	Totals.....	26	2	5
Totals.....	27	0	0				

aStruck out for Maglie in 9th.

Brooklyn.....	0	0	0	0	0	0	0	0	0-0
New York.....	0	0	0	1	0	1	0	0	x-2

E—None. RBI—Mantie, Bauer. HR—Mantie. S—Larsen. DP—Reese—Hodges; Hodges—Campanella—Robinson; Campanella—Robinson. LOB—Brooklyn 0, New York 3. BB, off—Maglie 2 (Slaughter, McDougald). SO, by—Larsen 7 (Gilliam, Reese, Hodges, Campanella, Snider, Maglie, Mitchell); Maglie 6 (Martin, Collins 2, Larsen, Bauer). R&ER, off—Maglie 2-2.

Umpires—Pinelli (N), plate; Soar (A), 1b; Bogess (N), 2b; Napp (A), 3b; Gorman (N), lf; Runge (A), rf. Time—2:06. Paid attendance—64,519.

## 6th Game—at Brooklyn, Oct. 9

NEW YORK (A)				BROOKLYN (N)				
	ab	r	h		ab	r	h	
Bauer, rf.....	5	0	2	Gilliam, 2b.....	3	1	1	
Collins, 1b.....	6	0	2	Reese, ss.....	4	0	0	
Mantie, cf.....	3	0	0	Snider, cf.....	2	0	1	
Berra, c.....	4	0	2	Robinson, 3b.....	4	0	1	
Slaughter, lf.....	3	0	0	Hodges, 1b.....	3	0	0	
Martin, 2b.....	4	0	1	Amoros, lf.....	3	0	0	
McDougald, ss.....	4	0	0	Furillo, rf.....	4	0	0	
Carey, 3b.....	4	0	0	Campanella, c.....	4	0	0	
Turley, p.....	4	0	0	Labine, p.....	4	0	1	
Totals.....	36	0	7	Totals.....	31	1	4	
New York.....	0	0	0	0	0	0	0	0-0
Brooklyn.....	0	0	0	0	0	0	0	1-1

E—None. RBI—Robinson. 2B—Berra, Collins, Labine. S—Reese. DP—Gilliam—Reese—Hodges. LOB—New York 8, Brooklyn 10. BB, off—Labine 2 (Slaughter, Mantle); Turley 8 (Hodges, Robinson, Gilliam 2, Snider 3, Amoros). SO, by—Labine 5 (McDougald 3, Bauer, Turley); Turley 11 (Reese, Furillo 2, Campanella 3, Labine 2, Snider, Amoros, Gilliam). R&ER, off—Turley 1-1.

Umpires—Soar (A), plate; Bogess (N), 1b; Napp (A), 2b; Pinelli (N), 3b; Runge (A), lf; Gorman (N), rf. Time—2:37. Paid attendance—33,224.

## 1956 ALL-STAR GAME

The National League defeated the American League for the sixth time in seven years in the 1956 renewal of the All-Star Game. The score of the contest, played July 10 at Griffith Stadium, Washington, was 7 to 3.

National.....	0	0	1	2	1	1	2	0	0	—	7	11	0
American.....	0	0	0	0	0	3	0	0	0	—	3	11	0

Batteries—Friend, Spahn (4), Antonelli (6) and Bailey, Campanella, Pierce, Ford (4), Wilson (5). Brewer (6). Score (3), Wynne (9) and Berra and Lollar. WP—Antonelli. LP—Pierce. Attendance—28,843. Receipts (gross)—\$105,982.50.

## 7th Game—at Brooklyn, Oct. 10

NEW YORK (A)				BROOKLYN (N)			
	ab	r	h		ab	r	h
Bauer, rf.....	5	1	1	Gilliam, 2b.....	4	0	0
Martin, 2b.....	5	2	2	Reese, ss.....	2	0	0
Mantle, cf.....	4	1	1	Snider, cf.....	4	0	2
Berra, c.....	3	3	2	Robinson, 3b.....	3	0	0
Skowron, 1b.....	5	1	1	Hodges, 1b.....	3	0	0
Howard, lf.....	5	1	2	Amoros, lf.....	3	0	0
McDougal, ss.....	4	0	1	Amorillo, rf.....	3	0	1
Carey, 3b.....	3	0	0	Campanella, c.....	3	0	0
Kucks, p.....	3	0	0	Newcombe, p.....	1	0	0
				Bessent, p.....	0	0	0
Totals.....	37	9	10	aMitchell.....	1	0	0
				Craig, p.....	0	0	0
				Roebuck, p.....	0	0	0
				bWalker.....	1	0	0
				Erskine, p.....	0	0	0
				Totals.....	28	0	3

aGrounded out for Bessent in 6th. bGrounded out for Roebuck in 8th.

New York.....	2	0	2	1	0	0	4	0	0	9
Brooklyn.....	0	0	0	0	0	0	0	0	0	0

E—Reese. RBI—Berra 4, Howard, Skowron 4. 2B—Martin, Howard. HR—Berra 2, Howard, Skowron. SB—Bauer. S—Kucks. DP—Kucks-Martin-Skowron; McDougal-Skowron. LOB—New York 6, Brooklyn 4. R, off—Newcombe 1 (Carey); Bessent 1 (Berra); Craig 2 (Mantle, Berra); Kucks 3 (Reese 2, Robinson). SO, by—Newcombe 4 (Martin, Mantle 2, Skowron); Bessent 1 (Kucks); Roebuck 3 (Carey, Martin, Mantle); Kucks 1 (Robinson). H, off—Newcombe 5 in 3 innings (faced one batter in 4th), Bessent 2 in 3, Craig 3 in 0 (faced five batters in 7th), Roebuck 0 in 2, Erskine 0 in 1. R&ER, off—Newcombe 5-5, Craig 4-4. Wild pitch—Craig. LP—Newcombe.

Umpires—Bogges (N), plate; Napp (A), 1b; Pinelli (N), 2b; Soar (A), 3b; Gorman (N), lf; Runge (A), rf. Time—2:19. Paid attendance—33,782.

## Series Batting Records

NEW YORK										
	g	ab	r	h	2b	3b	hr	rbi	bb	avg.
Bauer, rf.....	7	32	3	9	0	0	1	3	0	.281
*Collins, 1b.....	8	21	2	6	2	0	0	2	2	.238
Mantle, cf.....	7	24	6	6	1	0	3	4	6	.250
Berra, c.....	7	25	6	9	2	0	3	10	4	.360
Slaughter, lf.....	6	20	6	7	1	0	1	4	4	.350
*Skowron, 1b.....	3	10	1	1	0	0	1	4	0	.300
Martin, 3b, 2b.....	7	27	5	8	0	0	2	3	1	.296
McDougal, ss.....	7	21	0	3	0	0	0	1	3	.143
Howard, lf.....	1	5	1	2	1	0	1	1	0	.400
Carey, 3b.....	7	19	2	3	0	0	0	0	1	.158
G. Coleman, 2b.....	2	2	0	0	0	0	0	0	0	.000
Ford, p.....	2	4	0	0	0	0	0	0	0	.000
*Wilson.....	1	1	0	0	0	0	0	0	0	.000
Kucks, p.....	3	3	0	0	0	0	0	0	0	.000
*Curry, p.....	1	1	0	1	0	0	0	0	0	1.000
Turley, p.....	3	4	0	0	0	0	0	0	0	.000
*Siebern.....	1	1	0	0	0	0	0	0	0	.000
Larsen, p.....	2	3	1	1	0	0	0	1	0	1.000
Sturdivant, p.....	2	3	0	1	0	0	0	0	0	.333
Morgan, p.....	2	1	1	1	0	0	0	0	0	1.000
*Byrne, p.....	2	1	0	0	0	0	0	0	0	.000
McDermott, p.....	1	1	0	1	0	0	0	0	0	1.000
Totals.....	7	229	33	58	6	0	12	33	21	.253

BROOKLYN										
	g	ab	r	h	2b	3b	hr	rbi	bb	avg.
Gilliam, 2b.....	7	24	2	2	0	0	0	2	7	.083
Reese, ss.....	7	27	3	6	0	1	0	2	2	.222
Snider, cf.....	7	23	5	7	1	0	1	4	6	.304
Robinson, 3b.....	7	24	5	6	1	0	1	2	5	.250
Hodges, 1b.....	7	23	5	7	2	0	1	8	4	.304
Amoros, lf.....	6	19	1	1	0	0	0	1	2	.053
*Jackson.....	3	3	0	0	0	0	0	0	0	.000
Cimoli, lf.....	1	0	0	0	0	0	0	0	0	.000
Furillo, rf.....	7	25	2	6	2	0	0	1	2	.240
Campanella, c.....	7	22	2	4	1	0	0	3	7	.182
Neal, 2b.....	1	4	0	0	0	0	0	0	0	.000
Maglie, p.....	2	5	0	0	0	0	0	0	0	.000
Newcombe, p.....	2	1	0	0	0	0	0	0	0	.000
Craig, p.....	2	2	0	1	0	0	0	0	0	.500
Erskine, p.....	2	1	0	0	0	0	0	0	0	.000
*Walker.....	2	2	0	0	0	0	0	0	0	.000
Labine, p.....	2	4	0	1	1	0	0	0	0	.250
Roebuck, p.....	3	0	0	0	0	0	0	0	0	.000
*Mitchell.....	4	4	0	0	0	0	0	0	0	.000
Bessent, p.....	2	2	0	1	0	0	0	1	1	.500
Drysdale, p.....	1	0	0	0	0	0	0	0	0	.000
Totals.....	7	215	25	42	8	1	3	24	32	.195

\* Pinch hitter.

## OTHER 1956 SERIES STATISTICS

## Final Standings of the Clubs

	w	l	pct.
New York Yankees.....	4	3	.571
Brooklyn Dodgers.....	3	4	.429

## Seven-Game Totals

Paid attendance—345,903  
 Net receipts—\$2,173,254.59  
 Commissioner's share—\$327,488.20  
 Players' share—\$693,561.63  
 Clubs' and leagues' share—\$1,180,204.76

## CHESS

Source: American Chess Bulletin, New York.

## World Champions

Men—Mikhail Botvinnik, U.S.S.R.  
 Women—Mrs. Olga Rubtsova, U.S.S.R.  
 Junior—Boris Spassky, U.S.S.R.

## United States

Men—Arthur B. Bisguier, New York  
 Women—Mrs. Gisela K. Gresser, New York, and  
 Mrs. Nancy Roos, Los Angeles (co-champions)  
 Men's open—Arthur B. Bisguier  
 Women's open—Souja Graf Stevenson, Palm  
 Springs, Calif.  
 Speed—James T. Sherwin and Anthony F. Saidy,  
 New York (tie)  
 Amateur—Lt. John Hudson, Dover, Del.  
 Junior—Bobby Fischer, Brooklyn, N. Y.  
 Junior speed—Arthur Feuerstein, New York  
 Intercollegiate—Edmar Mednis, New York Uni-  
 versity

## Matches and Tournaments

Atlantic Coast championship—Dr. Adolph Stern,  
 Asbury Park, N. J.  
 All Tostal International—Alberic O'Kelly de Galway,  
 Belgium  
 Canadian open championship—Larry Evans, New  
 York  
 Commercial league championship—New York Uni-  
 versity  
 Greater New York championship—William Lom-  
 bardy, New York  
 Hastings (England) International—Victor Kor-  
 schnoi, U.S.S.R., and Fridrik Olafsson, Oceland  
 (tie)  
 International students, team—U.S.S.R.  
 International team—U.S.S.R.  
 Manhattan C. C. championship—Max Pavey,  
 Brooklyn, N. Y.  
 Marshall C. C. championship—Herbert Seidman,  
 Brooklyn, N. Y.  
 Metropolitan League championship—Manhattan  
 C. C.  
 Michigan Federation championship—Donald Byrne,  
 Ann Arbor, Mich.  
 Montreal championship—Lionel Joyner, Montreal  
 New Jersey Federation championship—Eliot Hearst,  
 New York  
 New Jersey championship—Lev Bionarovich,  
 Newark  
 New York State championship—Anthony E. Santa-  
 siere, New York  
 Reshevsky-Lombardy—Samuel Reshevsky, Spring  
 Valley, N. Y.  
 Rosenwald Trophy (second)—Arthur B. Bisguier  
 and Larry Evans (tie)  
 Soviet championship—Mark Taimanov, U.S.S.R.  
 Stevenson Memorial—Alberic O'Kelly de Galway  
 Tartakower Memorial—Donald Byrne  
 U.S.S.R. vs. Yugoslavia—U.S.S.R.  
 World challengers—Vassily Smyslov, U.S.S.R.

## SOFTBALL

## Amateur Softball Assn. Champions

Men—Clearwater (Fla.) Bombers beat Raybestos  
 Cardinals Stratford, Conn., 14 to 8, in final.  
 Women—Orange (Calif.) Lionettes beat Buena Park  
 (Calif.) Lynx, 1 to 0, in final.

## ROQUE

## National Championship

(American Roque League)

Champion—Bobby Arnold, Los Angeles  
 Second division—Kenney Fisher, Bement, Ill.

# ARCHERY

## U. S. Championships

(At Lakewood, N. J., Aug. 12-17)

### TARGET

Men—Joe Fries, Los Angeles.....	3,311
Women—Carole Meinhart, Pittsburgh, Pa.....	3,682
Men's Sextuple American—W. C. Pierce, Hastings, Mich.....	4,056
Men's Bare Bow Sextuple—Bertram Hatfield, Cincinnati, Ohio.....	4,022
Women's Bare Bow Sextuple—Regina Wikle, Binghamton, N. Y.....	3,216
Intermediate Boys—David Peterson, Long Beach, Calif.....	3,432
Intermediate Girls—Lynne Smathers, Brevard, N. C.....	3,112
Junior Boys—Kenny Smathers, Brevard, N. C.....	2,816
Junior Girls—Kay Volkman, Dayton, Ohio.....	2,565
Beginners Boys—David Oelkerling, Bronxville, N. Y.....	1,929
Beginners Girls—Loy Volkman, Dayton, Ohio.....	2,220

### CROSSBOW

Men—Paul Eytel, Pluckemin, N. J.....	2,600
Women—Lillian Eytel, Pluckemin, N. J.....	2,316
Uniors—Courtney Spencer, Scarsdale, N. Y.....	219
Men's clout—Col. Francis E. Pierce, Colorado, Calif.....	35-307
Women's clout—Fannie Brumblie, Cincinnati, Ohio.....	35-269
King's round—Paul Eytel.....	45

### CLOUT

Men (180 yd.)—Bob Rhode, Lamont, Ill.....	36-202
Women (140 yd.)—Eleanor Moccadio, Cleveland, Ohio.....	34-284
Women (120 yd.)—Julia Heagey, Lancaster, Pa.....	36-290
Intermediate Boys—David Peterson.....	36-290
Intermediate Girls—Lynne Smathers.....	36-294
Junior Boys—James Horwitz, Belmont, Mass.....	34-238
Junior Girls—Janet Leader, Cincinnati, Ohio.....	36-272
Beginners Boys—David Oelkerling.....	27-143
Beginners Girls—Loy Volkman.....	34-200

### WAND

Men (100 yd.)—O. K. Smathers, Brevard, N. C.....	7
Women (60 yd.)—Nina Erdely, New York City.....	7
Intermediate Boys—David Peterson.....	8
Intermediate Girls—Malinda Bangs, Brevard, N. C.....	5
Junior Boys—H. Van de Water, Jackson, Mich.....	6
Junior Girls—Cheryl Amand, Rego Park, N. Y.....	5
Beginners Boys—Fred Von Rein, White Plains, N. Y.....	4

### CLUB TEAM

Men—Cleveland Archers (Wilbert Vetrosky 96-718, Sylvester Chessman 96-746, Emil Pikula 96-740, Bernie Terrhart 96-652).....	384-2,856
Women—Lancaster (Pa.) Archers (Julia Heagey 96-710, V. Leamon 96-624, Rita Moore 96-598, Margaret Shenk 91-599).....	379-2,531

### FLIGHT

Class.....	Yards
Class.....	Yards
0 lb.—Charles Pierson, Cincinnati, Ohio.....	483
5 lb.—Charles Pierson.....	498
0 lb.—Charles Pierson.....	515
Unlimited—Charles Pierson.....	485
reestyle (footbow)—Charles Pierson.....	686

### WOMEN

5 lb.—Margaret Breneman, Columbus, Ohio.....	366
0 lb.—Barbara Von Popering.....	440
Unlimited—Barbara Von Popering.....	449

### BOYS

Intermediate (35 lb.)—Larry Briggs Jr., No. Amherst, Mass.....	179
Intermediate (50 lb.)—Roy Van Tassel.....	391
Intermediate (unlimited)—Roy Van Tassel.....	292
Junior (35 lb.)—James Dillon, Parma, Ohio.....	329
Junior (50 lb.)—James Dillon.....	405
Junior (unlimited)—James Dillon.....	359

### CROSSBOW

0 lb.—Col. Francis E. Pierce.....	402
5 lb.—Col. Francis E. Pierce.....	394
0 lb.—Col. Francis E. Pierce.....	406
Unlimited—Col. Francis E. Pierce.....	456

### WOMEN

35 lb.—Fannie Brumblie.....	278
50 lb.—Fannie Brumblie.....	336

## LAWN BOWLING

Source: W. G. (Bill) Hay, Honorary Life President, American Lawn Bowling Association.

### National Champions

Singles—Pete Campbell, Sheffield Ave. L. B. C., Pawtucket, R. I. Runnerup: Colin Sneed, Detroit East Side L. B. C.
Doubles—John Milne-John McArthur, Quincy (Mass.) L. B. C. Runnersup: Thomas Tomchik-Ike Balmain, New York L. B. C.
Triples—Charles Ferguson, Robert Barclay, Dave Ferguson, Robert Dickson (skip), Thistle Lawn B. C., Hartford, Conn. Runnersup: Ray Lees, Earle Hutt, Gabriel Strathdee, Robert Gray (skip), New Haven (Conn.) Municipal L. B. C.

### Fox Trophy Match

(U. S. vs. Great Britain)

United States.....	97 shots
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### Divisional Champions

#### CENTRAL

Singles—Dan Gillan, Columbus Park L. B. C., Chicago. Runnerup: Dr. John Huston, Milwaukee L. B. A.
Doubles—Dr. John Huston-Neil McCairns, Milwaukee L. B. C. Runnersup: Kenneth Martin-Howard Bates, Niles (Mich.) L. B. C.
Rinks—D. Campbell, D. Greenough, W. Morrison, D. Gillan, Columbus Park L. B. C., Chicago. Runnersup: H. Crerar, M. Gillan, A. Gilchrist, W. Crerar, Columbus Park L. B. C., Chicago.

#### NORTHWEST

Singles—A. Houston, Mt. Pleasant L. B. C., Vancouver B. C.
Doubles—S. Siddons-A. Morrison, Queen City L. B. C., Seattle, Wash.
Triples—T. Mathias, Stanley Park, R. L. Elliott (skip), Stanley Park L. B. C., Vancouver, and C. A. Sault, Queen City L. B. C., Seattle, Wash.

#### SOUTHEAST

Singles—Arthur H. Hartley, Clearwater (Fla.) L. B. C. Runnerup: Harry Hope, St. Petersburg, Fla.
Doubles—W. J. Tewksbury-Frank H. Greening, St. Petersburg (Fla.) L. B. C. Runnersup: Dr. R. W. Sendker-Harry Hope, St. Petersburg (Fla.) L. B. C.
Triples—Ross Flintoff, J. Smith, Frank Wilson (skip), St. Petersburg (Fla.) L. B. C. Runnersup: Stewart Tulloch, Hugh Burgess, Dr. Weston Krupp (skip), St. Petersburg (Fla.) L. B. C.

#### SOUTHWEST

Singles—Sandy Lockhart, San Francisco. Runnerup: N. H. Hooper, Redlands, Calif.
Doubles—William Moore-A. Lees, Lakeside L. B. C., Oakland, Calif. Runnersup: Sinker-McKenzie, Vancouver B. C.
Triples—W. G. (Bill) Hay, J. Mahony, F. W. Biggs (skip), Beverly Hills (Calif.) L. B. C. Runnersup: C. Sheere, H. Kaufman, D. Cameron, Arroyo Seco L. B. C., Los Angeles.

### Lebel Hurdles 16 Barrels for Record

Leo Lebel of Lake Placid, N. Y., a University of Connecticut student, successfully defended his world barrel jumping on ice skates championship in 1956. In the sixth annual international competition on Jan. 7 at the Grossinger (N. Y.) Country Club, Lebel cleared 16 barrels for a world record. He jumped 26 feet 2 inches.

Paul Bonafe of Quebec, a member of the Canadian Imperial Forces, won the Canadian championship by clearing 15 barrels for 25 feet 9½ inches.

Former world titleholder Terry Browne of Detroit, who has won the championship four times, was third with a 14-barrel hurdle for 22 feet 8 inches.



## NATIONAL HORSE SHOW

(At New York City, Oct. 30-Nov. 6)

### International Jumping

- Perpetual Challenge Trophy—Mexico  
 Individual Championship Challenge Trophy—Lt. William A. Ringrose, Irish Army (Ballynonty, b.g.)  
 Royal Winter Fair Trophy—Roberto Knoop, Chile (Pillan)  
 \$1,000 Stake—Brig. Gen. Humberto Mariles, Mexico (Chihuahua II, ch.g.)  
 Pennsylvania National Trophy—Brig. Gen. Humberto Mariles, Mexico (Chihuahua II, ch.g.)  
 Special Challenge Trophy—Hugh Wiley, U. S. (Nautical, pal.g.)  
 West Point Challenge Trophy—Lt. William A. Ringrose, Irish Army (Ballynonty, b.g.)  
 President of Mexico Trophy—Lt. Patrick J. Kiernan, Irish Army (Shannon Grove, b.g. and Glencree, b.m.)  
 Drake Memorial Challenge Trophy—Hugh Wiley, U. S. (Nautical, pal.g.)  
 Good Will Challenge Trophy—Brig. Humberto Mariles, Mexico (Chihuahua II, ch.g.)

### LOW SCORE COMPETITION CHALLENGE TROPHY

- First Event—Canada  
 Second Event—Douglas Cudney, Canada (Flash Gordon and Second Army)  
 Third Event—Mexico, Samuel Soberon (14 de Agosto, b.g.) and Brig. Gen. Humberto Mariles (Chihuahua II, ch.g.)  
 Final—Canada

### Other Events

- Open jumper—Riviera Wonder, gr.g., owned by Mr. and Mrs. Bernie Mann, Port Washington, N. Y.  
 Working hunter—Bronze Wing, b.g., owned by Fairview Farms, Greenwich, Conn.  
 Conformation hunter—Silverminer, gr.g., owned by Chinquapin Farm, Tryon, N. C.  
 Green conformation hunter—Duke of Paeonian, br.g., owned by Mr. and Mrs. John S. Pettibone, Middleburg, Va.  
 Professional Horsemen's Assn. Trophy (show)—Riviera Wonder, gr.g., owned by Mr. and Mrs. Bernie Mann, Port Washington, N. Y.  
 Professional Horsemen's Assn. Trophy (season)—Andante, br.m. owned by Mr. and Mrs. Ben Duffy, Armonk, N. Y.  
 Pony (small)—Nutcracker, gr.g., owned by Jimmie and Richard Zimmerman, Beltsville, Md.  
 Pony (large)—Covert Boy, b.g., owned by George John Wanner Jr.

### EQUITATION—JUNIORS

- Saddle seat (NHS)—Luann Beach, LaJolla, Calif.  
 Saddle seat (AHSA)—Luann Beach  
 Hunter seat—Michael Page, Briarcliff Manor, N. Y.  
 Dressage—Wilson Dennehy, Lake Forest, Ill.  
 U. S. Equestrian Team Challenge Cup—Wilson Dennehy

### POLO

#### National Outdoor Champions

- Open—Brandywine, Kennett Square, Pa.  
 Handicap—Meadow Brook, N. Y.

#### National Indoor Champions

- Senior—Squadron A, New York  
 Intercollegiate—Cornell

### MODERN PENTATHLON

#### International Championship

(At Bern, Switzerland, Sept. 7-9)

- Individual—Lt. Edgar O'Hair, U. S. Army... 4,599  
 Team—Sweden... 13,406

## WALKING

### National A. A. U. Champions

#### OUTDOORS

	Time
3,000 m.—Henry Laskau, 92d St. Y.M.H.A., New York City.....	13:39
10,000 m.—Henry Laskau.....	47:58
15,000 m.—Henry Laskau.....	1:12:40
20,000 m.—Alex Oakley, Gladstone A. C., Toronto..	1:39:06
25,000 m.—Henry Laskau.....	2:04:35
30,000 m.—Capt. Adolph Weinacher, U. S. Air Force	2:39:12
35,000 m.—Capt. Adolph Weinacher.....	3:00:35
40,000 m.—Capt. Adolph Weinacher.....	3:38:56
50,000 m.—Capt. Adolph Weinacher.....	4:38:57.5

#### INDOORS

1 mile—Henry Laskau.....	6:44.5
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### SYNCHRONIZED SWIMMING

#### Women's A. A. U. Champions

#### INDOOR

(At Tooele, Utah, Mar. 30-Apr. 1)

- Team—Athenians, Oakland, Calif.  
 Solo—Joanne Royer Maury, Long Beach, Calif.  
 Duet—Jackie Brown-Joanne Berthelsen, Oakland, Calif.

#### OUTDOOR

(At Reno, Nev., July 20-22)

- Team—Athenians  
 Solo—Linda Redings, Ft. Lauderdale, Fla.  
 Duet—Judy Haga-Sandy Giltner, Lansing, Mich.

### England Retains "The Ashes"

England retained "The Ashes," symbol of cricket supremacy, in 1956 by defeating Australia, three matches to one, with one match, the fifth, drawn. It was England's third straight triumph.

### Pacing Classic to Noble Adios

Noble Adios, driven by Johnny Simpson, won harness racing's Little Brown Jug in 1956. The classic for three-year-old pacers drew ten starters. Noble Adios, owned by Paul Wixom of Chicago, won in straight heats at the Delaware County (Ohio) Fairgrounds, going 2:01 and 2:00½.

### Richest Horse Race

The Garden State Stakes at Garden State Park, Garden, N. J., on Oct. 27, 1956, was the richest horse race ever run. It has a gross value of \$319,210. Nineteen two-year-old colts went to the post. The winner was Calumet Farm's Barbizon; the winner's share \$168,430.50.

### Fangio Wins Sports Car Race

Juan Manuel Fangio of Argentina, with Eugenio Castellotti of Italy as his driving partner, was the 1956 winner of the 12-hour Florida Grand Prix of Endurance for sports cars. Fangio and Castellotti drove Ferrari for an average speed of 84.06 m.p.h. to cover 194 laps or 946.4 miles. The race was held at Sebring, Fla., on March 24.

# INDEX

# TABLE OF CONTENTS

News Record of 1956 . . . . .	9	New Words and Meanings . . . . .	185
Headline Stories of 1956 . . . . .	15	Misspelled Words . . . . .	197
ELECTIONS OF 1956 . . . . .	20	Forms of Address . . . . .	200
Vote for President . . . . .	22	Headline History of Our Times . . . . .	203
Governors of the 48 States . . . . .	22	States of the U. S. . . . .	214
Members of the Senate . . . . .	23	Territories of the U. S. . . . .	234
Members of the House of Representatives . . . . .	25	Cities of the U. S. . . . .	238
RELEARNING MATHEMATICS . . . . .	28	U. S. Statistics . . . . .	250
YOUR FAMILY NAME—What Does It Mean? . . . . .	52	Colleges and Universities . . . . .	291
RECIPES FROM THE WALDORF-ASTORIA . . . . .	62	U. S. Geography . . . . .	306
JETS—MISSILES—ROCKETS . . . . .	67	U. S. Climate and Weather . . . . .	310
ECONOMIES OF THE UNITED STATES AND RUSSIA . . . . .	81	Mileages between Cities . . . . .	322
Who's Who . . . . .	90	National Park System . . . . .	328
Who Was Who . . . . .	113	Museums of the U. S. . . . .	330
Contract Bridge . . . . .	124	The Rise of the U. S. . . . .	336
Parliamentary Procedure . . . . .	126	Principal Bills and Treaties . . . . .	343
MAPS . . . . .	134	Ambassadors to and from the U. S. . . . .	353
Top of World with Air Bases of U. S. and U.S.S.R. . . . .	134	The U. S. Armed Services . . . . .	355
NATO and Iron Curtain Areas . . . . .	136	U. S. Postal Regulations . . . . .	365
Europe and Near East—Communist and Non-Communist . . . . .	138	U. S. Presidential Elections (1789—52) . . . . .	369
Eurasia—Communist and Non-Communist . . . . .	140	Presidents of the U. S. . . . .	383
Far East and Pacific, Formosa, Hawaiian Islands . . . . .	142	Executive Departments and Agencies . . . . .	398
Middle East—Oil Fields, Pipelines, Airbases . . . . .	144	U. S. Cabinet Members . . . . .	402
India . . . . .	145	Conferences and Treaties . . . . .	408
South America . . . . .	146	Declaration of Independence . . . . .	413
Africa . . . . .	147	Constitution of the U. S. . . . .	416
Canada, Alaska, Greenland . . . . .	148	Flag History and Etiquette . . . . .	431
Central America & West Indies . . . . .	149	Science . . . . .	434
United States . . . . .	150	Religion . . . . .	447
Hurricanes Entering Eastern Seaboard of U. S.; Long Island . . . . .	152	Awards . . . . .	465
U. S. Geography & Time Zones . . . . .	154	Aviation . . . . .	480
British Isles . . . . .	155	Astronomy and Calendar . . . . .	487
France, Spain, Portugal . . . . .	156	Nations of the World from Afghanistan to Yugoslavia . . . . .	512
Italy, Austria, Switzerland . . . . .	157	World Miscellaneous Information . . . . .	680
Crossword Puzzle Guide . . . . .	158	Historical and News Events . . . . .	711
Word Section . . . . .	185	Firsts in America . . . . .	715
		Societies and Foundations . . . . .	716
		American Economy . . . . .	718
		Income Tax . . . . .	744
		Social Security . . . . .	747
		The United Nations . . . . .	752
		SPORTS . . . . .	772
		1956 Champions and Records . . . . .	855
		INDEX . . . . .	883



# INDEX

## A

AM, 185  
 Abbreviations:  
   Academic degrees, 290  
   Chemical elements, 441-42  
 Aberdeen, S. Dak., 230  
 Abilene, Kans., 220  
 Absolute zero, 437  
 Abyssinia. *See* Ethiopia  
 Academic degrees, 288, 290  
 Academies: Service, 355-57  
 Academy Awards, 475-77  
 Academy of Natural Sciences of  
   Philadelphia, 332  
 Acadia National Park, 328  
 Accidents:  
   Aviation: famous, 707-08  
   Death rates, 277  
   Deaths: frequency, 275  
   Motor-vehicle: deaths, 276  
   Railroad: famous, 703-09  
   Transportation: deaths, 275  
 Accounting Office, General, 401  
 Aconcagua, 516, 684  
 Acronym: Defined, 185  
 Actium, Battle of, 711  
 Actors and Actresses, 90-112  
 Adams, John:  
   Biography, 383  
   Cabinet, 402  
   Election, 371  
   Family, 397  
   Hall of Fame, 479  
 Adams, John Quincy:  
   Biography, 385  
   Cabinet, 402  
   Election, 371  
   Family, 397  
   Hall of Fame, 479  
   Minority President, 428  
 Adamson Act, 343  
 Adding machine: Invention, 443  
 Addis Ababa, Ethiopia, 584  
 Address, Forms of, 200-02  
 Aden, 549  
   Area & population, 514, 526  
 Adenauer, Konrad, 598  
 Adler Planetarium, 511  
 Admirals: Armed Forces, 358  
 Admiralty Islands, 560  
 Admission to Union: States,  
   214-38  
 Adrenaline: Isolation, 444  
 Advent, 462-63  
 Advertising, 729  
 Afghanistan:  
   General information, 512-13  
   *See also* Countries  
 Africa:  
   Area, 683  
   British Commonwealth, 526,  
     534-38  
   Dimensions, 683  
   Elevations, 683  
   Exploration, 681  
   French territories, 589, 593-  
     95

Map, 147  
 Political changes, 212  
 Population, 250, 683  
 Religions, 447  
 World War II, 207  
 Agate (measure), 437  
 Agencies:  
   U. N., 756-57  
   U. S., 400-01  
 Agents: Establishments, 726  
 Agincourt, Battle of, 713  
 Agriculture:  
   Animals: on farms, 732  
   Employment, 724, 733  
   FAO, 746  
   Farms: number, 731  
   Income, 731  
   Legislation, 343-50, 351  
   Prices: index, 727  
   Production: by state, 732  
   Production: world, 741  
   Schools, 287  
   *See also* Farms: Food  
 Agriculture, U. S. Dept. of, 399  
 School lunch program, 286  
 Secretaries, 404-05  
 Aid. *See* Foreign aid  
 Air, 511  
 Air brake: Invention, 443  
 Air carriers: Traffic, 730  
 Air Force (U. S.):  
   Academy, 356-57  
   Airplanes: types, 486  
   Allowances, 362  
   History, 357  
   Legislation, 347, 348, 351  
   Officers, 358-59  
   Pay, 351, 359-62  
   Personnel, 363  
   Ranks, 359-60  
   Secretary of, 399  
 Air mail:  
   First service, 481  
   First transcontinental, 715  
   Foreign: rates, 367-68  
   U. S.: rates, 365  
 Air mileage, 324-27  
 Air parcel post, 365-68  
 Air pump: Invention, 443  
 Airbases: U. S., 134-37, 144  
 Airlift: Berlin, 209  
 Airlines:  
   Countries: leading, 743  
   Pilots: number, 484  
   Scheduled, 484  
 Airplanes:  
   Accidents, 707  
   Firsts, 480-82  
   Freight, 730  
   Invention, 443  
   Passengers, 484  
   Production, 485, 486  
   Types, 485, 486  
   *See also* Aviation  
 Airport: Largest, 227  
 Aisne, Battle of, 715  
 Akron, Ohio:  
   General information, 238  
   *See also* Cities (U. S.)

Akron (dirigible), 708  
 Alabama:  
   General information, 214  
   *See also* States  
 Alabama Museum of Natural  
   History, 332  
 Alameda, Calif., 256  
 Alamo, Battle of, 714  
 Alamogordo, N. Mex., 208, 226  
 Aland Islands, 586, 587  
 Alaska:  
   General information, 234-35  
   Education: funds, 286  
   Executions: method, 283  
   Holidays, 464  
   Map, 148  
   National Convention: dele-  
     gates, 369  
   Statehood, 350  
   Time Zones, 488  
   Volcanoes, 690  
 Albania:  
   General information, 513-14  
   *See also* Countries  
 Albany, N. Y., 256  
   *See also* Cities (U. S.)  
 Alberta (province), 545  
 Albright Gallery, 332  
 Albuquerque, N. Mex., 226, 256  
 Alcohol. *See* Liquor  
 Aleutians:  
   Islands, 234, 235  
   Volcanoes, 690  
 Alexander the Great, 711  
 Alexandria, Egypt, 581  
   Pharos, 682  
 Alexandria, Va., 232, 256  
 Alfonso XIII: Abdicates, 204  
 Algeria, 589, 591-92  
   *See also* Countries  
 Algiers, Algeria, 591  
 Alhambra (bldg.), 700  
 Alhambra, Calif., 256  
 Alien Registration Act, 346  
 All America Conference. *See*  
   Football  
 All-Star games, 785, 858, 877  
 Allegheny River, 308, 688  
 Allentown, Pa., 256  
 Allies (World War I), 213  
 Alphabet. *See* Letters  
 Altitudes:  
   Aviation: records, 483, 484  
   Deserts, 680  
   Lakes, 688  
   Mountain peaks, 684  
   States: U. S., 307  
   United States, 306  
   World, 683  
 Altoona, Pa., 256  
 Aluminum:  
   Hall process, 444  
   Imports, 738  
   Production: U. S., 722  
   Production: world, 743  
 Amarillo, Tex., 256  
   *See also* Cities (U. S.)  
 Amateur radio stations, 320  
 Amazon, 687

We have endeavored to prepare the INDEX for easy use by professional researchers and the average Mr. and Mrs. Public. This goal presents many difficulties and we modestly hope we have succeeded. Where we have failed we would appreciate your help. If you cannot find anything quickly and you think it's our fault, kindly send suggestions and criticisms to:

THE INFORMATION PLEASE ALMANAC  
 444 Madison Avenue  
 New York 22, N. Y.

Ambassador Bridge, 702  
 Ambassadors: To & from U. S., 353-54  
 Amendments: Constitution, 424-27  
 American Academy of Arts and Letters, 330  
 American Bible Society, 716  
 American Broadcasting Company, 318  
 American Derby, 836  
 American economy, 718-44  
 American Federation of Labor, 726  
 American Labor party, 376-80  
 American League. *See* Baseball  
 American Museum of Natural History, 330  
 American party, 371  
 American Revolution:  
   Casualties, 362  
   Events, 711  
 American Samoa, 236  
 American's Creed, 433  
 Amplitude Modulation: Defined, 185  
 Amsterdam, Netherlands:  
   Library, 696  
   Museum, 697  
   Zoo, 698  
   *See also* Cities (world)  
 Amu Darya, 687  
 Amur, 687  
 Amusement:  
   Consumer spending, 719  
   Establishments, 729  
   Price index, 719  
 Anchorage, Alaska, 234  
 Ancient empires, 693  
 Andaman and Nicobar Islands, 554  
 Andaman Sea, 685  
 Andorra, 591  
 Andrea Doria (ship), 13  
 Angel Falls, 686  
 Angelus Temple, 451  
 Anglo-Egyptian Sudan. *See* Sudan  
 Angola, 651  
 Angstrom, 437  
 Animals:  
   Classification, 444  
   Farm, 732  
   Gestation, incubation & longevity, 446  
   Names of males, females, young, 184  
 Annam, 596  
 Annapolis, Md., 222  
 Naval Academy, 355-56  
 Anniversaries: Wedding, 62  
 Antarctica:  
   Area, 683  
   Discovered, 683  
   Elevations, 683  
   Exploration, 682  
 Anthem, National, 430  
 Anthracite. *See* Coal  
 Anthropology: Races, 445  
 Antietam, Battle of, 711  
 Anti-Federalist party, 371  
 Antigua, 548  
 Antilles, Netherlands, 638  
 Antimasonic party, 371  
 Antimony: Production, 740  
 Antipodes: List, 457  
 Antitoxin: Diphtheria, 444  
 Antitrust laws, 343  
 Antwerp, Belgium, 518  
 Anzio, Italy, 207  
 Apothecaries weight, 435  
 Apparel. *See* Clothing  
 Appendicitis: Death rates, 274

Apples: Farm prices, 731  
 Arabia, 514  
   *See also* Saudi Arabia;  
   Yemen  
 Arabian Desert, 680  
 Arabs. *See* Israel; individual  
   Arab nations  
 Arai, Lake, 688  
 Archbishops:  
   Canterbury, 460  
   Roman Catholic, 453-54  
 Archery, 879  
 Architecture:  
   Buildings: tallest, 709  
   Structures: famous, 699-701  
 Arctic: Exploration, 682  
 Arctic Ocean, 685  
 Are (meas.): Defined, 434  
 Area:  
   Continents, 683  
   Countries, 703  
   Deserts, 680  
   Formulas for, 436  
   Islands, 685  
   Lakes, 688  
   Measures of, 434  
   Oceans & seas, 685  
   U. S.: cities, 256-59  
   U. S.: growth, 250  
   U. S.: states, 255  
   U. S.: water, 309  
 Argentina:  
   General information, 515-17  
   *See also* Countries  
 Aristotle, 693  
 Arizona:  
   General information, 214  
   *See also* States  
 Arkansas:  
   General information, 215  
   *See also* States  
 Arkansas River, 308, 688  
 Arlington Stakes, 837  
 Armada, Spanish, 714  
 Armed forces (U. S.):  
   Academies: service, 355-57  
   Airplanes, 486  
   Allowances, 362  
   Armed Forces Day, 432  
   Casualties, 362  
   Construction, 720  
   History, 357  
   Insignia, 359  
   Military interventions, 357  
   Officers, 357  
   Pay, 359-62  
   Personnel: by year, 363  
   Ranks, 359-60  
   Veterans' benefits, 364  
   *See also* Selective Service  
 Armed forces (world), 361  
 Armed Neutrality Act, 343-46  
 Armenia. *See* U.S.S.R.  
 Armistice Day. *See* Veterans Day  
 Army (U. S.):  
   Allowances, 362  
   Casualties, 362  
   Court martial cases, 283  
   Expenditure, 734  
   History, 357  
   Insignia, 359  
   Legislation, 347-51  
   Military Academy, 355  
   Officers, 358-59  
   Pay, 351, 359-62  
   Personnel: by year, 363  
   Ranks, 359-60  
   Reserve, 351  
   Secretary of, 398  
 Arrests: By sex & age, 282  
 "Arsenal of Democracy," 206  
 "Arsenal of the Nation," 216

Art Museums:  
   United States, 330-35  
   World, 697  
 Artemis: Temple of, 682  
 Arthur, Chester A.:  
   Biography, 390  
   Cabinet, 404  
   Family, 397  
 Articles of Confederation, 336, 429  
 Aruba, 638  
   "Aryan race," 465  
 Ascension Day, 462, 463  
 Ascorbic acid: In foods, 440  
 Ash Wednesday, 461, 463  
 Ashanti, 536  
 Asheville, N. C., 256  
 Ashmolean Museum, 697  
 Asia:  
   Area, 683  
   British Commonwealth, 526, 549-57  
   Dimensions, 683  
   Elevations, 683  
   Exploration, 681  
   French territories, 589, 596  
   Map, 140-41  
   Population, 250, 683  
   Religions, 447  
   Structures: famous, 700  
 Assassinations and attempts, 354  
 Assaults: Number & arrests, 282  
 Assessed valuation: By city, 238-47  
 Assets:  
   Corporations, 728  
   Federal Reserve System, 736  
   Insurance companies, 730  
 Associations, 716-17  
   Sports, 772  
 Assyrian empire, 693  
 Astronomy:  
   Atmosphere, 511  
   Auroras: polar, 508  
   Comets, 506-08  
   Constants, 510  
   Eclipses (1957), 510-11  
   Measures, 437, 438  
   Meteors, 510  
   Moon, 505, 509  
   Observatories, 511  
   Planetaria, 511  
   Planets, 509  
   Seasons, 508-09  
   Stars: brightest, 507  
   Stars: morning & evening, 504-05  
   Sun, 506  
   Symbols, 503  
   Telescopes, 511  
   Zodiac: signs, 503  
 Athens, Greece, 602  
   World War II, 207  
 Athletes: Of year, 832  
 Atlanta, Ga.:  
   General information, 238-39  
   Fire (1946), 706  
   *See also* Cities (U. S.)  
 Atlantic Charter, 207  
 Atlantic City, N. J., 256  
 Atlantic Ocean:  
   Dimensions, 685  
   Flights over, 480-82  
   Hurricanes, 310-11  
   Passages: record, 710  
   U. S.: coastline, 309  
   U. S.: water area, 309  
 Atlas. *See* Maps  
 Atlas Mountains, 635  
 Atmosphere, 511  
 Atomic bomb:  
   Bikini, 208

Clinton Engineer Works, 231  
 Explosions, 208  
 Hanford Engineer Works, 233  
 Los Alamos laboratory, 226  
 Oak Ridge, 231  
 U.S.S.R., 209  
 Washington Conference (1945), 208  
**Atomic cocktail:** Defined, 185  
**Atomic energy:**  
   Civilian control, 347, 350  
   Control: U. N., 208, 209  
   Discoveries, 444  
   Einstein: theorem, 436  
   First atomic submarine, 210  
   Museum, 332  
   Pool launched, 349  
**Atomic Energy Comm. (U. S.),** 400  
   Creation, 347  
   Education, 286  
   Openheimer decision, 211  
**Atoms. See Elements**  
**Atonement, Day of,** 462  
**Attendance. See Education**  
**Attorneys General (U. S.),** 402-05  
**Auburn, Maine,** 221  
**Auckland Islands,** 562  
**Augusta, Ga.,** 256  
**Augusta, Maine,** 221  
**Aureomycin: Discovery,** 444  
**Aurora, Ill.,** 256  
**Auroras, polar,** 508  
**Austerlitz, Battle of,** 713  
**Austin, Nev.,** 502  
**Austin, Tex.,** 256  
**Australia:**  
   General information, 526, 557-59  
   Dimensions, 683  
   Treaty: U. S., N. Z., 411-12  
   *See also Countries*  
**Australian Desert,** 680  
**Austria:**  
   General information, 517-18  
   *See also Countries*  
**Austrian Credit Anstalt,** 204  
**Autogyro: First flights,** 481  
**Automobile industry:**  
   Detroit, 223  
   Establishments, 726  
   Exports, 738  
   Hours worked, 724  
   Imports, 738  
   Production, 723  
   Repairs: shops, 729  
   Sales, 727  
   Wages, 724  
**Automobiles:**  
   Accidents: deaths, 275-77  
   Auto racing, 817, 853-54  
   Highest auto road, 216  
   Invention, 443  
   Laws: by state, 321  
   Ownership, 728  
   Thefts: arrests, 282  
   With radios, 320  
**Autumn (1957),** 509  
**Avalanches: Alps,** 705  
**Aviation:**  
   Accidents: famous, 730  
   Air carriers: traffic, 730  
   Air mileages: between cities, 324-27  
   Airlines: pilots, 484  
   Airlines: scheduled, 484  
   Airplanes: production, 485, 486  
   Airplanes: types, 485, 486  
   CAB, 400  
   Deaths, 275

Domestic traffic, 730  
 Firsts: famous, 480-82  
 Freight, 730  
 ICAO, 756  
 Inventions, 443-44  
 National Air Museum, 332  
 Passenger-miles flown, 730  
 Passengers, 730  
 Records, 483-84  
**Avordupois weight,** 435  
**Awards:**  
   Academy, 475-77  
   N. Y. Critics', 477-78  
   Nobel prizes, 465-69  
   Overseas Press Club, 475  
   Pulitzer prizes, 470-75  
 "Axis":  
   Formed, 205  
   Member nations, 213  
**Azerbaijan,** 611  
**Azores,** 651

## — B —

**Babylon:** Hanging gardens, 682  
 "Babylonian Captivity," 711  
**Babylonian empire,** 693  
**Bacon's Rebellion,** 711  
**Bacteria: Discovery,** 444  
**Badlands,** 230  
**Badminton,** 856  
**Baffin: Area,** 685  
**Baffin Bay,** 681  
**Baghdad, Iraq,** 613  
**Bahamas,** 542  
   Area & population, 526  
   Map, 149  
**Bahrain Islands,** 549  
   Area & population, 514, 526  
**Baikal, Lake,** 688  
**Bakelite: Invention,** 443  
**Baker, Oreg.,** 502  
**Baker Island,** 236  
**Bakersfield, Calif.,** 312  
**Balance of payments: U. S.,** 736  
**Bale (weight): Defined,** 437  
**Balearic Islands,** 659  
**Balfour Declaration,** 711  
**Balkan Wars,** 711  
**Balkhash, Lake,** 688  
**Balloons:**  
   Flights, 480  
   Helium: first use, 481  
   Invention, 443  
**Baltic Sea,** 685  
**Baltimore, Md.:**  
   General information, 239  
   *See also Cities (U. S.)*  
**Bamboo Curtain: Defined,** 186  
**Bangor, Maine,** 502  
**Banks (Isl.),** 685  
**Banks & Banking:**  
   Bank holiday (1933), 204  
   Federal Deposit Insurance Corporation, 344  
   Federal Reserve System, 343, 400, 736  
   First bank, 715, 716  
   International Bank, 746  
   Legislation, 343-45  
   Money & interest rates, 735  
   RFC, 344  
   State-owned bank, 228  
   U. S. Bank, 337, 338  
   *See also Federal Reserve*  
**Baptist Churches,** 447-48  
**Barbados,** 542  
   Area & population, 526  
**Barber shops: Number,** 729  
**Barents Island,** 642  
**Barley:**  
   Prices: farm, 731

**Production: world,** 741  
**Barometer: Invention,** 443  
**Barre, Vt.,** 232  
**Barrel (meas.),** 438  
**Baseball:**  
   1956 champions & records, 874-78  
   All-Star games, 785, 877  
   All-time records, 780, 784  
   Ball parks: dimensions, 785  
   Bating: records, 780, 782, 874  
   Clubs: nicknames, 785  
   Clubs: number, 729  
   Commissioner, 773  
   Game: longest, 786  
   Government, 773  
   Hall of Fame, 332, 783  
   History, 773  
   Junior World Series, 786  
   Major leagues, 774-85, 874-78  
   Measurements, 823  
   Minor leagues, 786, 874  
   Most Valuable Players, 785  
   National Baseball Congress, 821  
   Pennant winners: by year, 781  
   Pitching: records, 784, 876  
   Ruth: home runs, 783  
   World Series, 774-80, 782, 876-78  
**Basic English,** 186  
**Basketball:**  
   1956 champions & records, 857, 858  
   College, 814  
   History, 814  
   Measurements, 823  
   Olympic Games, 800  
   Professional, 814  
**Bastille: Destroyed,** 711  
**Basutoland,** 534  
   Area & population, 526  
**Bataan,** 207, 208  
**Baton Rouge, La.,** 256  
**Battlefield Parks, National,** 328, 329  
**Battlefield Sites, National,** 328, 329  
**Battleships: U. S.,** 362  
**Baudouin I,** 519  
**Bauxite,** 215, 740  
**Bay City, Mich.,** 256  
**Bayonne, N. J.,** 256  
**Bazooka: Defined,** 186  
**Beaumont, Tex.,** 256  
**Beauty Parlors: Number,** 729  
**Bebop: Defined,** 186  
**Bechuanaland,** 534  
   Area & population, 526  
**Bedloe's Island,** 415  
**Beds: Hospital,** 278  
**Beef: Prices,** 731  
**Beer hall putsch,** 203  
**Beet Sugar. See Sugar**  
**Belgian Congo:**  
   General information, 520-21  
   *See also Countries*  
**Belgium:**  
   General information, 518-21  
   *See also Countries*  
**Belgrade, Yugoslavia,** 678  
**Bellingham, Wash.,** 233  
**Belmont Futurity Stakes,** 837  
**Belmont Stakes,** 838  
**Benedictine Order,** 711  
**Benefits:**  
   Social Security, 747-51  
   Veterans, 364  
**Benes, Eduard,** 576  
**Beria, Lavrenti P.,** 210  
**Bering Sea,** 685



Bering Strait: Discovered, 681  
 Berkeley, Calif., 256  
 Berkshire Museum, 332  
 Berlin, Germany:

General information, 601  
 Airlift, 209  
 Congress of Berlin, 714  
 Museums, 698  
 Russian blockade, 209  
 State Library, 696  
 World War II, 208  
*See also* Cities (world)

Berlin, N. H., 225

Bermudas, 542

Area & population, 526

Bernadotte, Count, 617

Berwyn, Ill., 256

Bessemer converter, 443

Betatron, 186

Bethlehem, Pa., 256

Bhutan, 521

Bible, 711

Characters, 169-72

Bicycles. *See* Cycling

Bifocal lens: Invention, 443

Big Bend National Park, 328

Bikini, 208, 238

Bill of Rights, 424

Billiards, 825-26, 869

Parlors: number, 729

Billings, Mont., 224

Bills: Congressional, 343-51

Bills (money), Portraits, 271

Bijoux, Miss., 223

Binaural sound, 186

Binet tests, 444

Binghamton, N. Y., 256

Biographies: Presidents (U. S.), 383-95

Biological warfare, 186

Birds:

Incubation & longevity, 446  
 State, 214-38

Birmingham, Ala.:

General information, 239

*See also* Cities (U. S.)

Birmingham, England, 525

Birth rates:

By age of mother, 270

By country, 269

By race, 269

By state, 267

By year, 268

Highest: by country, 743

Births:

By age of mother, 270

By order of, 263

By race, 269

By state, 267

By year, 268

Famous persons, 90-112

Multiple, 269

Birthstones, 182

Bishops:

Methodist, 453

Protestant Episcopal, 452-53

Roman Catholic, 454-55

Bismarck, N. Dak., 502

Bismarck Archipelago, 559-60

Bituminous. *See* Coal

Black Death, 711

Black Friday, 711

Black Hills, 230

Black market: Defined, 186

Blacksmith shops: Number, 729

Blanc, Mt., 684

Blind flight: First, 482

Blind persons: Education, 286

Blitz: Defined, 186

Blockbuster: Defined, 186

Blood:

Circulation of: discovery, 444

Tests: for marriage, 263

"Blood, toil, tears, sweat," 206

Blue ribbon jury, 186

Board foot, 438

Bobbleheading, 791, 864

Boer War, 711

Boiling point:

Chemical elements, 441-42

Water, 437

Boise, Idaho, 502

Bolivia:

General information, 521-23

*See also* Countries

Bolt (meas.), 438

Bombay, India, 553, 554

Bombers, 485, 486

Bonded debts: Cities, 238-47

Bonin Islands, 238

Volcano, 689

Bonuses:

Bonus marchers, 204

Legislation, 344, 346

Boogie-woogie, Defined, 186

Bookburning, Defined, 186

Books: Postal rate, 366

*See also* Literature: Publishing

Bop: Defined, 186

Borneo (isl.), 609, 685

Borneo, North, 549-50

Area & population, 526

Bosporus, 668

Boston, Mass.:

General information, 239

Boston Massacre, 711

Boston Tea Party, 711

Fires, 706

*See also* Cities (U. S.)

Bosworth Field, Battle of, 715

Botanic garden: First, 715

Botleneck: Defined, 186

Botulism, 446

Bougainville, 562

Boulder, Colo., 216

Boulder Dam. *See* Hoover Dam

Boundaries: U. S., 306

Bourbon. *See* Reunion

Bouvet Island, 642

Bowling, 815-16, 817, 869

Alleys: number, 729

Lawn bowling, 879

Boxer Rebellion, 711

Boxing:

1956 champions, 868

A.A.U., 868

Bare-knuckle champions, 802

Champions, world, 803-04

First: famous, 804

Gates: biggest, 801

Heavyweight Championship

fight, 802

History, 801

Louis: ring record, 805

Measurements, 823

Neil Award, 804

Olympic Games, 800

Weight limits, 805

Boy Scouts of America, 718

Brahmaputra, 687

Brainwashing: Defined, 187

Brazil:

General information, 523-25

*See also* Countries

Bremen (ship), 710

Brest-Litovsk, Treaty of, 203

Brethren, Church of, 450

Bricker Amendment, 350

Bridge (game):

Contract bridge, 124-25

Bridgeport, Conn., 256

Bridges:

Highest auto bridge, 231

Highest suspension bridge, 216

Notable bridges, 702

Bristol, Eng.: Museum, 698

British Cameroons. *See* Cameroons

British Columbia, 545

British Commonwealth, 525-62

*See also* Individual nations

British Guiana. *See* Guiana

British Honduras. *See* Honduras

British Loan Act, 347

British Malaya. *See* Malaya

British Museum, 696, 697

British New Guinea. *See* Papua

Broadcasting. *See* Radio; Television

Broadway: Longest runs, 717

Brookton, Mass., 256

Brokers: Establishments, 726

Bronx:

Area & population, 258

Borough President, 244

*See also* New York, N. Y.

Bronx-Whitestone Bridge, 702

Brooklyn:

Area & population, 258

Borough President, 244

Brooklyn Museum, 330

*See also* New York, N. Y.

Brooklyn Bridge, 702

Brown, John, 711

Brownout: Defined, 187

Brunel, 550

Area & population, 526

Brussels, Belgium, 518

Library, 696

Museums, 697

*See also* Cities (world)

Bryan, William Jennings, 372-373

Bryce Canyon National Park, 328

Buchanan, James:

Biography, 388

Cabinet, 403

Election, 372

Minority President, 428

Nomination, 370

Budapest, Hungary, 606

Museum, 698

Buddhists: Number, 447, 450

Budget. *See* Expenditure; Revenue

Budget, Bureau of, 398

Buenos Aires, Argentina, 515, 702

Conference (1936), 205

Buffalo, N. Y.:

General information, 239

*See also* Cities (U. S.)

Buhl Planetarium, 511

Building. *See* Construction

Buildings:

Famous, 699-701

Tallest, 709

Bulgarian, Nikolai:

Becomes Premier, 211

Bulgaria:

General information, 562-64

*See also* Countries

Bulge, Battle of, 207, 208

Bull Run, Battle of, 711

Bulldozer: Defined, 187

Bunker Hill, Battle of, 711

Burbank, Calif., 256

Bureau of the Budget, 398

Burgesses, House of, 715

Burglary, 282

Burlington, Vt., 232

Burma:

General information, 564-66

*See also* Countries

Burnett Immigration Bill, 343

Burns: Death rates, 277

- Burr, Aaron, 371**  
 Duel with Hamilton, 712  
**Bushel:** Defined, 436  
**Business.** See *Economy*  
**Busses:**  
 Accidents: death rate, 275  
 Earnings & hours worked, 725  
 Passengers, 730  
**Butte, Monte., 224**  
**Butter:**  
 Consumption, 719  
 Production: world, 741  
 Rationing, 207  
**Butterfat:** Prices, 731  
**Byelorussian S.S.R., 670**  
 See also *Union of S.S.R.*  
**Byzantine architecture, 699**
- C —
- C.O.D. mail, 367**  
**Cabinets:**  
 Canada, 545  
 Confederacy, 405  
 Great Britain, 528  
 U. S. (1789-1956), 402-05  
 U. S.: 1st woman member, 716  
 U. S.: salaries, 397  
**Cable (meas.), 438**  
**Cadre:** Defined, 187  
**Caesar, Julius, 693**  
**Cairo, Egypt, 704**  
 Conference (1943), 408  
**Calcutta, India, 704**  
**Calendar:**  
 Gregorian replaces Julian, 712  
 Perpetual, 504  
 Year 1957, 489-500  
 Years, 1956-58, 503  
**Calgary, Alberta, 502**  
**Calhoun, John C., 371, 402, 403**  
**California:**  
 General information, 215  
 See also *States*  
**California Academy of Sciences, 333**  
**California Palace of the Legion of Honor, 333**  
**Calories:** Of foods, 440  
**Calvin, John, 714**  
**Cambodia:**  
 General information, 566  
 See also *Countries*  
**Cambridge, Mass., 256**  
**Camden, N. J., 256**  
**Camera:** Invention, 443  
**Cameroons, British, 526, 537**  
 Volcano, 689  
**Cameroun, 592**  
 Area & population, 589  
**Camp Fire Girls, 716**  
**Canada:**  
 General information, 543-47  
 Hurricane, 706  
 See also *Countries*  
**Canadian River, 308**  
**Canal Zone:**  
 General information: 236, 343  
 Map, 149  
**Canals:** Famous, 692  
**Canary Islands, 659**  
 Volcano, 689  
**Cancer:** Death rates, 274  
**Cancer, Tropic of, 508**  
**Cane sugar.** See *Sugar*  
**Canoeing, 867**  
**Canterbury, Archbishops of, 460**  
**Canton, China, 568**  
**Canton (isl.), 237**  
**Canton, Ohio, 256**  
 Capacity: Units, 435-36  
**Cape Bon, 207**  
**Cape Colony, 540**  
**Cape Horn:** Discovered, 682  
**Cape of Good Hope, 681**  
**Cape-to-Cairo Railroad, 711**  
**Cape Verde Islands, 651**  
 Volcano, 689  
**Capetown, So. Africa, 704**  
**Capital Parks, National, 328, 330**  
**Capital punishment:**  
 First state to abolish, 715  
 First state to use gas, 225  
 Methods: by state, 283  
 See also *Executions*  
**Capitals:**  
 Highest capital, 522  
 State capitals, 214-38  
**Capitol (U. S.), 217**  
**Caporetto, Battle of, 715**  
**Capricorn, Tropic of, 508**  
**Caracas, Venezuela, 675**  
**Carat (meas.), 438**  
**Carburetor:** Invention, 443  
**Cardinals, College of, 455-57**  
**Caribbean Sea, 685**  
**Caribou, Maine, 312**  
**Carloadings:** Railroad, 721  
**Carlsbad, N. Mex., 502**  
**Carlsbad Caverns, 328, 691**  
**Carnegie Corporation, 716**  
**Carnegie Endowment, 716**  
**Carnegie Institute, 333**  
**Carnival season, 461**  
**Caroline Islands, 238**  
**Carriers:** Domestic traffic, 730  
**Carson City, Nev., 225**  
**Carthage, 711**  
**Cartoons:**  
 First colored, 715  
 Pulitzer Prizes, 470-71  
**Casablanca Conference, 207**  
**Case Bill, 347**  
**Casper, Wyo., 234**  
**Caspian Sea, 688**  
**Casualties:** War, 362-64  
**Catalogs:** Postal rate, 366  
**Caterpillar Club:** First member, 481  
**Cathedrals:** European, 699-700  
**Catholic Churches, 448**  
 See also *Roman Catholic Church*  
**Cattle:**  
 Prices: farm, 731  
 Production: U. S., 732  
 Production: world, 741  
**Caucasoids, 445**  
**Caves and Caverns, 691**  
**Cedar Rapids, Iowa, 256**  
**Celebes, 609, 685**  
**Cellophane:** Invention, 443  
**Celluloid:** Invention, 443  
**Cemeteries, National, 328, 330**  
**Census:**  
 Established, 417  
 Population (1790-1950), 250  
 See also *Population*  
**Centare:** Defined, 434  
**Centigrade scale, 437**  
**Central America:** Map, 149  
**Central Powers (WWI), 213**  
**Cerebral hemorrhage, 274**  
**Cermak, Anton J., 354**  
**Certified mail, 367**  
**Ceylon:**  
 General information, 550-51  
 See also *Countries*  
**Chad, 693**  
 Area & population, 589  
**Chain (meas.), 438**  
**Chain reaction:** Defined, 187  
**Chain stores:** Sales, 728  
**Chalons, Battle of, 711**  
**Chamberlain, Neville, 527**  
**Chambers, Whittaker, 209**  
**Champlain, Lake:** Battle of, 715  
**Channel Islands, 553**  
 Area & population, 526  
**Chapel Hill, N. C., 511**  
**Chaplin, Charles:** Barred from U. S., 210  
**Character assassination, 187**  
**Charge accounts, 719**  
**Charlemagne, 711**  
**Charles I:** Beheaded, 711  
**Charleston, S. C., 230**  
 See also *Cities (U. S.)*  
**Charleston, W. Va., 233**  
 See also *Cities (U. S.)*  
**Charlotte, N. C., 227**  
 See also *Cities (U. S.)*  
**Charter:** U. N., 759-71  
**Chattanooga, Tenn., 256**  
 See also *Cities (U. S.)*  
**Cheese:**  
 Consumption, 719  
 Production: world, 741  
 Rationing, 207  
**Cheesecake:** Defined, 187  
**Chemical industry:**  
 Establishments, 726  
 Exports, 738  
 Hours worked, 724  
 Prices, 727  
 Production, 721  
 Wages, 724  
**Chemistry:**  
 Discoveries, 444  
 Elements, 441-42  
 Nobel Prizes, 466-69  
**Chesapeake Bay, 309**  
**Chess, 808, 878**  
**Chester, Pa., 256**  
**Cheyenne, Wyo., 234**  
**Chiang Kai-shek, 568, 569**  
**Chicago, Ill.:**  
 General information, 239-40  
 Fires, 706  
 Museums, 331  
 Planetarium, 511  
 See also *Cities*  
**Chickenpox:** Incubation & communicability, 446  
**Chickens:**  
 On farms, 732  
 Prices: farm, 731  
**Chief Justices:**  
 List, 406  
 Salary, 397  
**Children:**  
 Child labor, 343, 346  
 Of Presidents, 397  
 Offenses against, 282  
**Children's Crusade, 711**  
**Chile:**  
 General information, 566-68  
 Volcanoes, 690  
 See also *Countries*  
**China:**  
 General information, 568-72  
 Aid: legislation, 347, 348  
 Exploration, 681  
 Floods, 705  
 Japan: Invaded by, 204  
 U. S. intervention, 358  
 Wall of China, 712  
 World War II, 346  
 See also *Countries*  
**Chinese (U. S.), 252, 269**  
 See also *Nonwhite races*  
**Chinese-Japanese War, 711**  
**Chinese Turkestan.** See *Sinkiang*  
**Chosen.** See *Korea*  
**Christ.** See *Jesus*

- Christian Science, 450  
 Christianity:  
   Christians: number, 447  
   Roman Empire, 711  
   *See also individual churches*  
 Christmas, 463, 464  
 Christmas Island, 552  
 Chrome: Imports, 738  
 Chromite: Production, 740  
 Chromosphere, 506  
 Chronology:  
   Historical & News events, 711-15  
   Years 1917-1955, 203-13  
   Year 1956, 9-15  
   *See also History*  
 Chrysler Bldg., 709  
 Chungking, China, 704  
   *See also Cities (world)*  
 Church of England, 460  
 Churches:  
   Leading: U. S., 447-51  
   Number: by city, 238-47  
   *See also Religion*  
 Churchill, Winston, 527  
   "Blood, toil, tears, sweat," 206  
   Terms as Prime Minister, 182  
 Cicero, Ill., 256  
 Cincinnati, Ohio:  
   General information, 240  
   *See also Cities (U. S.)*  
 Circle: Formulas, 436  
 Circular measure, 436  
 Circumference:  
   Formula for, 436  
   Of Earth, 509  
 Circus Museum, 334-35  
 Cities (U. S.):  
   General information, 238-47  
   Area, 256-59  
   Climate, 312-14  
   Governments, 249  
   Largest: by state, 214-38  
   Longitude & latitude, 501  
   Magnetic declinations, 501  
   Mileages between, 322-25  
   Museums, 330-35  
   National Conventions, 370  
   Newspapers: leading, 316-17  
   Oldest city in U. S., 218  
   Population (1920-50), 256-59  
   Time of day, 501  
 Cities (world):  
   Largest, 704  
   Longitude & latitude, 501  
   Mileages between, 326-27  
   Population, 704  
   Time of day, 501  
 Citizenship (U. S.): Defined, 425  
   *See also Naturalization*  
 City Managers: Salaries, 249  
 Civil Aeronautics Board, 400  
 Civil-defense bill, 349  
 Civil rights, 424  
 Civil Service Commission, 401  
 Civil War, American, 338-39  
 Casualties, 362  
 Events, 711  
 Civilian Conservation Corps, 204, 344  
 Clarksburg, W. Va., 233  
 Classified: Defined, 187  
 Clay, Henry, 371, 402, 407  
 Clay Industry:  
   Hours worked, 724  
   Production, 721  
   Wages, 724  
 Clayton Antitrust Act, 343  
 Cleaning plants:  
   Earnings & hours worked, 725  
   Number, 729  
 Cleveland, Grover:  
   Biography, 391  
   Cabinets, 404  
   Elections, 372  
   Family, 397  
   Hall of Fame, 479  
   Minority President, 428  
   Nominations, 370  
 Cleveland, Ohio:  
   General information, 240  
   *See also Cities (U. S.)*  
 Cleveland Heights, Ohio, 256  
 Clifton, N. J., 256  
 Climate:  
   Cities: U. S., 312-14  
   World: extremes, 692-93  
   *See also Weather*  
 Clinton Engineer Works, 231  
 Cloak-and-Dagger: Defined, 188  
 Clocks:  
   Imports, 738  
   Pendulum clock: invention, 443  
 Cloisters (museum), 330  
 Closed circuit: Defined, 188  
 Clothing industry:  
   Consumer spending, 719  
   Establishments, 726  
   Hours worked, 724  
   Price index, 719  
   Production index, 721  
   Sales, 727  
   Wages, 724  
 Cloture rule: Defined, 352  
 Cloud chamber: Defined, 188  
 Clovis, N. Mex., 226  
 Coal industry:  
   Coal products: manufacture, 721  
   Exports, 738  
   Hours worked, 724, 725  
   Leading state, 233  
   Production: U. S., 721, 722  
   Production: world, 740  
   Wages, 724, 725  
 Coast and Geodetic Survey, 359  
 Coast Guard (U. S.):  
   Academy, 356  
   Allowances, 362  
   Education: government funds, 286  
   History, 357  
   Insignia, 359  
   Officers, 358-59  
   Pay, 359-62  
   Personnel: by year, 363  
   Ranks, 358-59  
 Coastline: U. S.: by state, 309  
 Coaxial cable: Defined, 188  
 Cochin-China, 596  
 Cocoa:  
   Consumption, 719  
   Imports, 738  
 Code, Justinian, 713  
 Code Napoleon, 711  
 Code of Hammurabi, 711  
 Coeducation: First, 715  
 "Co-existence," 342  
 Coffee:  
   Consumption, 719  
   Imports, 738  
   Coke: Production, 722  
   Cold front: Defined, 188  
   Cold War, 213  
   Defined, 188  
   Colds, common, 446  
   Collect-on-delivery mail, 367  
   Collective security: Defined, 188  
   College of Cardinals, 455-57  
 Collegos:  
   Accredited, 291-305  
   Ancient & modern, 694-96  
   Degrees: academic, 290  
   Enrollment, 286  
   Graduates, 287  
   Libraries, 696  
   Number surviving through, 287  
   Presidents, 291-305  
   United States, 291-305, 696  
 Cologne, Germany, 598  
   World War II, 207  
 Colombia:  
   General information, 572-73  
   Volcanoes, 690  
   *See also Countries*  
 Colonial Williamsburg, 333  
 Colorado:  
   General information, 215  
   Mountain peaks, 306  
   *See also States*  
 Colorado River, 308, 688  
   Project (1956), 351  
 Colorado Springs, Colo., 216, 333  
   Air Force Academy, 356-57  
 Colosseum, 699  
 Colossus: Rhodes, 682  
 Columbia, S. C., 230, 256  
 Columbia Broadcasting System, 318  
 Columbia River, 688  
 Columbus, Christopher, 681  
 Columbus, Ga., 218, 256  
 Columbus, Ohio:  
   General information, 240  
   *See also Cities (U. S.)*  
 Columbus Day, 464  
 Combustion: Nature of, 444  
 Comets, 506-07  
 Cominform. *See* Communist Information Bureau  
 Comintern. *See* Third International  
 Commando: Defined, 188  
 Commerce. *See* Economy  
 Commerce, U. S. Dept. of, 399  
   Education: funds, 286  
   Secretaries, 404-05  
 Commerce & Labor, U. S. Dept. of, 404  
 Commissions: City, 249  
 Committee for Industrial Organizations, 205  
 Committees:  
   Congressional, 24  
   National: chairmen, 352  
 Commonwealth Fund, 716  
 Commonwealth of Nations, 525-62  
   *See also individual nations*  
 Communications:  
   Countries: leading, 743  
   Establishments, 722  
   FCC, 400  
   ITU, 757  
 Communism:  
   Countries, 213  
   Countries: maps, 136-37  
   *See also Union of S.S.R.*  
 Communist Information Bureau, 209  
 Communist International, 713  
 Communist Manifesto, 711  
 Communist party (U. S.):  
   Election statistics, 375-77  
   11 leaders guilty, 209  
   Internal Security Act of 1950, 349  
   Outlawed, 211, 350  
 Como, Lake, 620  
 Comoro Islands, 589, 594  
   Volcano, 689  
 Companies: Billion-dollar, 728  
 Compromise of 1850, 711-12  
 Comstock Lode, 225



- Concert music. *See* Music  
 Concord, N. H., 225  
 Conditioned reflex, 444  
 Cone: Volume, 436  
 Confederate Memorial Day, 464  
 Confederate States of America:  
   Cabinet, 405  
   Capital, 232  
   Capital, temporary, 214  
   Flag, 431  
   President & Vice President, 405  
   Proclaimed, 712  
   Secession dates, 352  
   *See also* Civil War  
 Conferences: WW II, 408-10  
 Confucianists: Number, 447  
 Congo. *See* Belgian Congo;  
   Middle Congo  
 Congo (river), 681, 687  
 Congregational Churches, 450  
 Congregational organizations,  
   Jewish, 461  
 Congress (U. S.):  
   Assembling time, 418  
   Bills & treaties since 1900,  
     343-51  
   Committees, 24  
   First meeting, 420  
   Library of Congress, 401, 697  
   Members: list of, 23-27  
   Party standings, 63  
   Powers, 419  
   Salaries, 350, 397  
   Shooting in Houses, 210  
   *See also* House; Senate  
 Congress of Berlin, 714  
 Congress of Industrial Organiza-  
   tions:  
   Formed, 205  
   Leading unions, 726  
 Congress of Vienna, 712  
 Congresses, Continental, 429-30  
 Conjunctivitis, 446  
 Connecticut:  
   General information, 216  
   *See also* States  
 Connecticut River, 308  
 Conspiracy: Penalty, 350  
 Constantinople: Founded, 712  
   *See also* Istanbul  
 Constitution (U. S.):  
   Amendment procedure, 423  
   Dates ratified, 416  
   History, 337  
   Text, 416-27  
 Constitutional Union party, 372  
 Constitutions (state):  
   Dates adopted, 214-38  
   First state to have, 216  
 Construction industry:  
   Activity: by type & year, 720  
   Employment, 724  
   Establishments, 722  
   Expenditure, 718  
   Hours worked, 725  
   Houses built, 721  
   Wages, 725  
 Consumers:  
   Credit, 719  
   Goods: output, 723  
   Prices, 719  
   Spending, 719  
 Contact lens: Defined, 188  
 Continental Congresses, 429-30  
 Continental Divide, 306  
 Continental Flag, 431  
 Continents. *See* individual con-  
   tinents  
 Contour Farming: Defined, 188  
 Contract bridge, 124-25  
 Conventions: National, 369, 370  
 Converter: Bessemer, 443
- Coolidge, Calvin:  
   Biography, 393  
   Cabinet, 405  
   Election, 373  
   Family, 397  
   Nomination, 370  
 Cooperstown, N. Y., 332, 333, 334  
 Copenhagen, Denmark, 577  
 Copernican theory, 444  
 Copper industry:  
   Imports, 738  
   Production: U. S., 722  
   Production: world, 740  
 Copyrights: Procedure, 320  
 Coral Sea, Battle of, 207  
 Corcoran Gallery, 331-32  
 Corfu, 203  
 Corn:  
   Exports, 738  
   Prices: farm, 731  
   Production: U. S., 732  
   Products: consumption, 719  
 Corning Glass Center, 333  
 Coronary thrombosis, 188  
 Corporations, 728  
 Corpus Christi (holiday), 463  
 Corpus Christi, Tex., 256  
 Corregidor, 207  
 Corrigan, Douglas: Flight, 206  
 Corvallis, Oreg., 229  
 Costa Rica:  
   General information, 573-74  
   Volcanoes, 690  
   *See also* Countries  
 Cotton Bowl (football), 807  
 Cotton gin: Invention, 443  
 Cotton industry:  
   Exports, 738  
   Hours worked, 724  
   Income: marketing, 731  
   Plantation: largest, 223  
   Prices: farm, 731  
   Production: U. S., 732  
   Production: world, 742  
   Wages, 724  
 Council of Economic Advisers,  
   398  
 Council of Nicaea, 711  
 Council of Trent, 711  
 Councils, City, 249  
 Counter Reformation, 712  
 Counter-intelligence: Defined,  
   188  
 Counterfeiting:  
   Arrests, 282  
   Prisoners: Federal, 283  
 Counties: Number by state,  
   214-38  
 Countries:  
   Agriculture, 741-42  
   Airlines, 743  
   Airmail rates from U. S. to,  
     368  
   Armed forces, 744  
   Birth rates, 269  
   Birth rates: highest, 743  
   Cold War, 213  
   Communications, 743  
   Currency: par value, 737  
   Death rates, 275  
   Death rates: lowest, 744  
   Diplomatic personnel to &  
     from U. S., 353-54  
   Employment, 743  
   Immigration: to U. S., 254  
   Industry, 723, 743  
   International Bank: loans,  
     736  
   Life expectancy, 281  
   Maps, 134-57  
   Mineral production, 740-41  
   Political changes, 211-12  
   Railways, 743
- Resources, 741-44  
   Telephones, 743  
   Trade: highest, 743  
   Trade: with U. S., 739  
   United Nations: members,  
     753  
   World War I, 213  
   World War I: casualties, 364  
   World War II, 213  
   World War II: casualties,  
     363  
 Court martial: Cases, 283  
 Court of Justice, International,  
   757  
 Court tennis, 856  
 Courtesy cards: Defined, 188  
 Courts:  
   Federal, 422  
   Federal: convictions, 283  
   States: highest, 248  
   *See also* Supreme Court  
 Coventry, England, 206  
 Covington, Ky., 220, 256  
 Cowpens, Battle of, 711  
 Cows: On farms, 732  
 "Coxey's Army," 712  
 "Cradle of Liberty," 222  
 Cranston, R. I., 230  
 Crater Lake National Park, 328  
 Craters: Meteor, 510  
 Cream: Consumption, 719  
 Crécy, Battle of, 713  
 Credit: Consumer, 719  
 Crete, 603  
 Crime:  
   Arrests: number, 282  
   Executions: methods, 283  
   Major crimes, 282  
   Prisoners: Federal, 283  
 Crimean War, 712  
 Crops. *See* Farming  
 Crossword puzzle guide, 158-84  
 Crucifixion of Christ, 712  
 Crusades, 712  
   Children's Crusade, 711  
 Cuba:  
   General information, 574-75  
   *See also* Countries  
 Cuba: Volume, 436  
 Cubes and Cube roots, 439  
 Cubit, 438  
 Cumberland, Md., 222  
 Curaçao, 638  
 Curling (sport), 864  
 Currency. *See* Money  
 Currier Gallery, 333  
 Curtis, Charles, 396  
 Curtis Cup, 791  
 Custer massacre, 712  
 Customs: Receipts, 734  
 Cutback: Defined, 188  
 Cyanide: Invention, 443  
 Cybernetics: Defined, 189  
 Cycling, 824, 871  
 Cyclotron, 189, 443  
 Cylinder: Volume, 436  
 Cyprus, 551  
   Area & population, 526  
 Czars: Russia, 184  
 Czechoslovakia:  
   General information, 575-77  
   *See also* Countries

— D —

- D-Day, 207  
 Dachau concentration camp, 208  
 Daguerreotype process, 443  
 Dahomey, 589  
 Dairy products:  
   Exports, 738  
   Income: marketing, 731

- Dakar, 593, 594  
 Dallas, Tex.:  
   General information, 240  
   *See also* Cities (U. S.)  
 Dalton, John: Theory, 444  
 Dams: World, 701  
 Dance halls: Number, 729  
 Dante: Divine Comedy, 712  
 Danube, 600, 689  
 Danzig, 206  
 Dardanelles, 668  
 Dare, Virginia, 715  
 Date-line, 488  
 Davenport, Iowa, 220, 256  
 Davis, Jefferson, 403, 405  
 Davis Cup, 792  
 Dawes Charles G., 373  
 Dawes Plan, 203  
 Daylight saving time, 488  
 Days: Sidereal & solar, 510  
 Dayton, Ohio, 240  
 Dead Sea: Elevation, 683  
 Deaf persons: Education, 286  
 Dearborn, Mich., 223, 256  
 Death rates:  
   Accidental: transportation, 275  
     By age, 272, 274  
     By cause, 274, 277  
     By country, 275  
     By marital status, 274  
     By race, 272  
     By sex, 272, 274  
     By state, 273, 277  
     By year, 272  
   Lowest: by country, 744  
   Motor-vehicle: by state, 276  
 Death Valley: Elevation, 306  
 Deaths:  
   Accidental, frequency, 275  
   Assassinations, 354  
   By state, 273  
   By year, 272  
   Casualties: war, 362-64  
   From hurricanes, 310-11  
   From tornadoes, 312  
   Motor-vehicle: by state, 276  
   Motor-vehicle: by year & type, 276  
 Debs, Eugene V., 372-73, 714  
 Debts:  
   Bonded: by city, 238-47  
   Public, 735  
 Decamiso: Defined, 189  
 Decatur, Ill., 256  
 Decimals: Fraction equivalents, 439  
 Declaration of Independence, 413-15  
 Decoration Day, 462, 464  
 Defense, U. S. Dept. of, 398-99  
   Armed Services, 355-64  
   Education: funds, 286  
   Expenditures, 734  
   Legislation, 347-51  
   Radar warning lines, 148  
   Secretaries, 405  
 Defense Mobilization, Office of, 398  
 Deficit spending: Defined, 189  
 Degree day: Defined, 189  
 Degrees: Academic, 288, 290  
 Delaware:  
   General information, 216-17  
   *See also* States  
 Delaware Bay, 309  
 Delegates: National Conventions, 369  
 Delinquents: Education, 286  
 Delta wing plane, 189  
 Democratic party:  
   Congress, 23-27  
   Elections: Presidential, 371-81  
   National Committee, 352  
   National Conventions, 369, 370  
   State voting the longest for, 232  
 Democratic Republican party, 371  
 De Molay, 717  
 Denmark:  
   General information, 577-79  
   *See also* Countries  
 Density:  
   Chemical elements, 441-42  
   Population. *See* Population  
 Denver, Colo.:  
   General information, 241  
   *See also* Cities (U. S.)  
 Department stores, 727, 728  
 Deposits. *See* Banks  
 Depths:  
   Lakes, 688  
   Oceans & seas, 685  
 Des Moines, Iowa, 219, 220  
   *See also* Cities (U. S.)  
 Desegregation, 19-20  
 Deserts: Principal, 680  
 Destroyers: Traded to Britain, 206  
 Detective agencies: Number, 729  
 Detergent: Defined, 189  
 Detroit, Mich.:  
   General information, 241  
   *See also* Cities (U. S.)  
 Deuterium: Discovery, 444  
 de Valera, Eamon, 614  
 Devil's Island, 595  
 Devon: Area, 685  
 Dew line, 148  
 Dewey, Thomas E.:  
   Candidate for President, 378, 379  
   Nominations for President, 370  
 Diabetes mellitus: Death rates, 274  
 Diamonds: N. A. mine, 215  
 Diarrhea: Death rates, 274  
 Dienbienphu, Indo-China, 211  
 Diesel engine: Invention, 443  
 Dim out: Defined, 189  
 Dingley Tariff, 339  
 Dioceses: Roman Catholic, 454-55  
 Diode: Invention, 443  
 Dionne quintuplets, 204  
   Emilie dies, 211  
 Diplomats: To & from U. S., 353-54  
 Diphtheria:  
   Antitoxin, 444  
   Death Rates, 274  
   Incubation & communicability, 446  
   Schick test, 444  
 Directory (France), 712  
 Dirigible: First, 480  
 Disasters, 705-09  
 Disc jockey: Defined, 189  
 Discophile: Defined, 189  
 Discoveries:  
   Chemical elements, 441-42  
   Historical, 681-82  
   Scientific, 443-44  
 Diseases:  
   As causes of death, 274  
   Incubation period & communicability, 446  
 Disorderly conduct: Arrests, 282  
 Displaced persons: Legislation, 347  
 Distances:  
   Between cities, 322-27  
   Northern hemisphere, 134-35  
 District of Columbia:  
   General information, 217  
   Bonus army, 204  
   Congress: legislation, 420  
   Lincoln Memorial, 701  
   Museums, 331-32  
   White House, 407  
   Zoo, 698  
   *See also* States  
 Divine Comedy of Dante, 712  
 Divorces:  
   "Divorce capital," 225  
   Divorced persons: deaths, 274  
   Divorced persons: number, 262  
   Grounds for, 265  
   Laws: by state, 264-65  
   Number: by state, 264  
   Number & rates: by year, 261  
 Dixon-Yates contract: Canceled, 351  
 Dnieper, 688  
 Doctors:  
   First woman doctor, 716  
   Number, 260  
 Dodecanese, 603, 621  
 Dogs: Shows, 822, 871  
 Dollfus, Engelbert, 517  
 Dominican Order: Founded, 712  
 Dominican Republic:  
   General information, 579-80  
   U. S. intervention, 358  
   *See also* Countries  
 Don (river), 688  
 Doodle: Defined, 189  
 Dorr Rebellion, 712  
 Douay Version of Bible, 711  
 Double talk: Defined, 189  
 Double-think: Defined, 189  
 Douglas, Ariz., 214  
 Dover, Del., 216  
 Draft. *See* Selective Service  
 Drama. *See* Theater  
 Dred Scott case, 712  
 Dresden, Germany, 600  
 Dreyfus case, 712  
 Driving:  
   Licenses, 321  
   Mileages between cities, 322-23  
   Speed limits, 321  
 Drowning: Death rates, 277  
 Drug stores:  
   Leading, 728  
   Number, 726  
   Sales, 727  
 Drugs:  
   Arrests, 282  
   Laws: Federal prisoners, 283  
   Pure Food & Drug Act, 343  
   *See also* Narcotics  
 Drunkenness: Arrests, 282  
 Dry goods:  
   Sales, 727  
   Stores: leading, 728  
   Wholesale, 726  
 Dublin, Ireland, 614  
   Museum, 698  
 Dubuque, Iowa, 502  
 Duck pins, 817, 869  
 Dulles, John Foster, 405  
 Duluth, Minn., 223  
 Du Mont Television Network, 318  
 Dunkerque evacuation, 206  
 Dunkers, 450  
 Durham, N. C., 227  
 Dutch East Indies. *See* Indonesia  
 Dutch Guiana. *See* Surinam

Dynamite: Invention, 443  
 Dynamo: Invention, 443  
 Dysentery, 446

## E

"E pluribus unum," 335  
 Earth (planet), 509  
 Earthquakes: Famous, 705  
 East Africa High Commission, 534-36  
 East Chicago, Ind., 256  
 East China Sea, 685  
 East Germany. *See* German Democratic Republic  
 East North Central States:  
   Economy: statistics, 733  
   Population: marital status, 262  
 East Orange, N. J., 257  
 East St. Louis, Ill., 219, 257  
 East South Central States:  
   Economy: statistics, 733  
   Population: marital status, 262  
 Easter Island, 567  
 Easter Rebellion, 712  
 Easter Sunday, 461, 463  
 Eastern Orthodox Churches, 447, 713  
 Eastport, Maine, 221  
 Eating places. *See* Restaurants  
 Eclipses (1957), 510-11  
 Economic Advisers, Council of, 393  
 Economic and Social Council.  
   *See* United Nations  
 Economy:  
   Russian compared to U. S., 81-89  
   Statistics, 718-44  
 Ecuador:  
   General information, 580-81  
   Earthquake (1949), 705  
   Volcanoes, 690  
   *See also* Countries  
 Eden, Anthony, 525  
 Edict of Nantes, 712  
 Edinburgh, Scotland, 525  
 Edmonton, Alberta, 545  
 Education:  
   Colleges, accredited, 291-305  
   College statistics, 287  
   Construction, 720  
   Consumer spending, 719  
   Degrees: academic, 290  
   Employment, 725  
   Federal aid, 286  
   Legislation, 351  
   Negroes, 288  
   Private schools, 286  
   Public schools, 284-89  
   School attendance laws, 285  
   States: statistics, 284, 286  
   Technical, 287  
   UNESCO, 757  
   Veterans, 364  
   Vocational schools, 287  
 Edward VIII (England), 527  
 Egghead: Defined, 189  
 Eggs:  
   Consumption, 719  
   Exports, 738  
   Income: marketing, 731  
   Prices, 731  
 Egypt:  
   General information, 581-83  
   Ancient empire, 693  
   Pyramids, 682  
   Structures, 699  
   Suez crisis, 15-17  
   *See also* Countries

Egyptian mythology, 181  
 Eiffel Tower, 700  
 Eighteenth Amendment, 426  
 Einstein, Albert:  
   Arrives in U. S., 204  
   Nobel prize, 467  
   Relativity, 444  
   Theorem, 436  
 Eire. *See* Ireland  
 Eisenhower, Dwight D.:  
   Biography, 395  
   Administrations, 342  
   Cabinet, 405  
   Coronary thrombosis, 211  
   Elections, 380  
   Election (1956), 20-21  
   Family, 397  
   Nominations, 370  
   Supreme Commander of NATO Forces, 210  
 Elba: Napoleon exiled to, 713  
 Elbe: Americans & Russians meet, 208  
 Elbert, Mt., 306, 684  
 El Centro, Calif., 502  
 Elder statesman: Defined, 189  
 Elections:  
   Election Day, 462, 463, 464  
   Presidential (1789-1952), 371-81  
   Presidential (1956), 20-21  
   Presidential: procedure, 369, 425  
   *See also* Voting  
 Electoral College:  
   Appointment & qualifications, 420  
   Procedure, 369, 425, 426  
   Vote (1789-1956), 371-81  
 Electoral Commission, 373  
 Electric railways: Traffic, 730  
 Electrical industry:  
   Appliances, 723  
   Customers, 733  
   Establishments, 726, 729  
   Exports, 738  
   Hours worked, 724, 725  
   Machinery, 738  
   Price Index, 719  
   Production: U. S., 721  
   Production: world, 743  
   TVA, 401  
   Wages, 724, 725  
 Electricity:  
   Cost of operation, 436  
   Inventions & discoveries, 443-44  
 Electrocutation:  
   First, 715  
   States using, 283  
 Electromagnet: Invention, 443  
 Electromagnetic waves, 444  
 Electron: Discovery, 444  
 Electron microscope, 443  
 Electroplating process, 443  
 Elementary schools. *See* Schools  
 Elements: Chemical, 441-42  
 Elevations. *See* Altitudes  
 Elevator: Invention, 443  
 Eleventh Amendment, 424  
 Elizabeth II (England), 528  
   Becomes Queen, 527  
   Crowned, 210  
   Marriage, 209  
 Elizabeth, N. J., 257  
 Elks (assn.), 716  
 Ell (meas.), 438  
 Ellesmere (Canada), 685  
 Ellice Islands. *See* Gilbert  
 El Paso, Tex., 257  
   *See also* Cities (U. S.)  
 El Salvador:  
   General information, 655

Volcanoes, 690  
   *See also* Countries  
 Elsmere, Del., 216  
 Emancipation Proclamation, 711  
 Embezzlement:  
   Arrests, 282  
   Prisoners: Federal, 283  
 Emergency Quota Act, 343  
 Emigration: From U. S., 253  
   *See also* Immigration  
 Empires: Ancient, 693  
 Employment:  
   Agencies: number, 729  
   Agricultural: by state, 733  
   By industry & year, 724  
   Countries: leading, 743  
   Manufacturing: by state, 733  
   State employees, 725  
 Endebury, 237  
 Energy: Conversion from matter, 436  
   *See also* Atomic energy  
 England:  
   Area, 527  
   Church of England, 460  
   Population, 527  
   Rulers, 181-82  
   *See also* Great Britain  
 Enid, Okla., 228  
 Eniwetok, 238  
 Entertainment. *See* Amusement  
 Ephesus: Temple, 682  
 Epileptic persons: Education, 286  
 Epiphany, 461  
 Epsom Derby, 838-39  
 Equinoxes, 508  
 "Era of Good Feeling," 385  
 Erie, Lake, 688  
   Battle of, 715  
   U. S.: area, 309  
 Erie, Pa., 229  
 Erie Canal, 227  
 Eritrea, 585, 621  
 Eruptions. *See* Volcanoes  
 Escalator clause: Defined, 190  
 Espionage: Penalty, 350  
 Establishments: Business, 722, 726, 729  
 Estonia:  
   General information, 583-84  
   *See also* Union of S.S.R.  
 Ether: First use, 444  
 Ethiopia:  
   General information, 584-85  
   Italian invasion, 618  
   *See also* Countries  
 Etna, Mt., 689  
 Eugene, Oreg., 229, 502  
 Euphrates, 687  
 Europe:  
   Area, 683  
   Dimensions, 683  
   Elevations, 683  
   Exploration, 681  
   Industrial production, 723  
   Map, 138-39  
   Population, 250, 683  
   Religions, 447  
   Structures: famous, 699-700  
 European Coal-Steel Community, 210  
 European Defense Community Treaty, 210  
 European Recovery Program, 347, 348  
 Euthanasia: Defined, 192  
 Evangelical churches, 451  
 Evans, Mt., 306  
 Evanston, Ill., 257  
 Evansville, Ind., 219, 257  
 Evening schools, 287



Evening stars (1957), 504-05  
 Events, *See* Chronology  
 Everest, Mt., 684  
   Climbed, 210  
 Everglades National Park, 328  
 Evolution, 444  
   Scopes trial, 714  
 Excise taxes, 350  
 Execution:  
   First, 715  
   Methods, 283  
 Executive Depts. (U. S.), 398-400  
   Secretaries (1789-1956), 402-05  
   Secretaries: salaries, 397  
 Expectation of life, 278-81  
 Expenditures:  
   Advertising, 729  
   By cities, 238-47  
   By year, 734  
   Consumer, 719  
   Educational, 284, 286, 288  
   Government, 734  
   Gross national product, 718  
   Plant & equipment, 723  
   States, 214-38  
 Explorations, 681-82  
 Explosions: Famous, 706  
 Exports:  
   By country, 739-40  
   Countries: leading, 743  
   U. S.: by commodity, 738  
   U. S.: by year, 739-40  
 Extradition: Between states, 422-23

## F

FBI, 399  
 FM. *See* Frequency modulation  
 Faeroe Islands, 579  
 Fahrenheit scale, 437  
 Failures: Business, 722  
 Fair Deal, 342  
 Fair Trade Acts of 1952, 349  
 Fairbanks, Alaska, 234  
 Fair-trade agreement, 190  
 Falkland Islands, 547-48  
   Area & population, 526  
 Fall (1957), 509  
 Fall River, Mass., 222, 257  
 Falling bodies:  
   Law: discovery, 444  
   Speed & distance, 436  
 Falls: Death rates, 277  
 Families:  
   Number, 270, 271  
   Persons per family, 271  
   With telephones, 733  
 Family names, 52-62  
 Famous persons:  
   Who Was Who, 113-23  
   Who's Who, 90-112  
 Far East:  
   Map, 140-41  
 Fargo, N. Dak., 228, 502  
 Farm Credit Administration, 400  
 Farmer-Labor party, 373  
 Farmers' Museum, 333  
 Farms and farming:  
   AAA, 344, 346  
   Animals: domestic, 732  
   Construction, 720  
   Federal farm board, 344  
   Income, 731  
   Legislation, 343-50  
   Loans: government, 343-48  
   Mortgages, 345  
   Number, 731

Population, 731  
 Prices: index, 727  
 Prices: parity, 731  
 Products: establishments, 726  
   Property, 731  
   Soil conservation, 346  
   Tenant farmers, 731  
   Working population, 260  
 Fascism, 618  
 Fates (myth.), 175  
 Father's Day, 464  
 Fathom (meas.), 438  
 Fats:  
   Consumption, 719  
   Exports, 738  
 Fawkes, Guy, 712  
 Feasts: Jewish, 461-63  
 Feather merchant: Defined, 190  
 Featherbed rule, 190  
 Federal Bureau of Investigation, 399  
 Federal Civil Defense Administration, 400  
 Federal Communications Commission, 400  
 Federal courts:  
   Convictions, 283  
   Jurisdiction, 422  
 Federal Deposit Insurance Corporation, 344  
 Federal Farm Bankruptcy Act, 345  
 Federal Farm Loan Act, 343  
 Federal Housing Administration, 345  
 Federal Mediation and Conciliation Service, 400  
 Federal Power Commission, 400  
 Federal Reserve Board, 345, 400  
 Federal Reserve System, 400, 736  
   Act: violators, 283  
   Legislation, 343  
 Federal Securities Act, 344  
 Federal Trade Commission, 343, 400  
 Federalist party, 371  
 Feedback: Defined, 190  
 Fellow traveler: Defined, 190  
 Fels Planetarium, 511  
 Females. *See* Women  
 Fencing, 818, 871  
 Fenimore House, 333-34  
 Feudalism, 712  
 Field Foundation, 716  
 Field Museum, 331  
 Fifteenth Amendment, 426  
 Fifth column: Defined, 190  
 Fighters (planes), 486  
 Figure skating, 819  
 Fiji, 526, 560  
 Filament: Tungsten, 443  
 Fillbuster: Defined, 352  
 Filling stations, 726  
 Fillmore, Millard:  
   Biography, 388  
   Cabinet, 403  
   Family, 397  
 Films. *See* Motion pictures  
 Finance:  
   Employment, 724  
   Establishments, 722  
 Fingal's Cave, 691  
 Finland:  
   General information, 585-87  
   *See also* Countries  
 Fireballs, 510  
 Firemen: Number, 725  
 Fires: Famous, 706  
 "Fireside Chat": First, 204  
 Firms: Number, 722, 726, 729  
 First Fruits, Feast of, 462  
 First International, 713

Firsts:  
   Aviation, 480-82  
   Boxing, 804  
   In America, 715-16  
 Fishing: Records, 812, 848  
 Fission: Defined, 190  
 Five and Ten Cents Store, 715  
 Five percent: Defined, 190  
 Five-Year Plan, 204  
 Flag:  
   Confederate, 431  
   United Nations, 758  
   U. S.: etiquette, 431-33  
   U. S.: Flag Day, 462  
   U. S.: history, 431  
   U. S.: Pledge to, 433  
 Flagstaff, Ariz., 502  
 Flaxseed: Prices, 731  
 Flights, 480-82  
 Flint, Mich., 223  
   Sit-down strike, 205  
 Floods: Famous, 705-06  
 Florence, Italy:  
   Library, 696  
   Museums, 697  
 Florida:  
   General information, 217-18  
   *See also* States  
 Florida State Museum, 334  
 Flour:  
   Consumption, 719  
   Exports, 738  
   *See also* Wheat  
 Flowers: State, 214-38  
 Fluid drive: Defined, 190  
 Fly and bait casting, 865  
 Flying Enterprise (ship), 706  
 Flying shuttle: Invention, 443  
 Folk art museum, 334  
 Food and food industry:  
   Calories, 440  
   Consumer spending, 719  
   Consumption, 719  
   Establishments, 726  
   Exports, 738  
   FAO, 756  
   Food poisoning, 446  
   Grocery stores: leading, 728  
   Hermetic sealing, 443  
   Hours worked, 724  
   Imports, 738  
   Income: marketing, 731  
   Prices: index, 719, 727  
   Production: U. S., 721  
   Production: world, 741  
   Pure Food and Drug Act, 343  
   Sales, 727  
   Vitamins, 440  
 Football,  
   Bowl games, 806-07  
   Famous series: records, 807  
   History, 806  
   Measurements, 823  
   Professional, 808  
 Ford Foundation, 716  
 Fordney-McCumber Tariff, 203  
 Foreign aid:  
   Legislation, 347-51  
   *See also* Marshall Plan  
 Foreign phrases, 172  
 Foreign trade: U. S., 739-40  
 Forestry:  
   Countries: leading, 742  
   Resources: U. S., 307  
   State forests, 214-38  
 Forgery:  
   Arrests, 282  
   Prisoners: federal, 283  
 Formosa, 571  
   Map, 142  
 Forms of address, 200-02  
 Formulas: Common, 436  
 Fort Smith, Ark., 215

Fort Wayne, Ind., 219

Fort Worth, Tex.:

General information, 241

See also Cities (U. S.)

Foundations, 716-17

Fountain pen: Invention, 443

Fourteen Points, 203

Fourteenth Amendment, 425-26

Fractions: Decimal equivalents, 439

France:

General information, 587-97

NATO, 213

Rulers, 183

SEATO, 213

Western European Union, 213

See also Countries

Franciscan Order: Founded, 712

Franco, Francisco, 206, 657

Franco-Prussian War, 712

Frankfort, Ky., 220

Franklin Institute, 332

Fraternity: First, 715

Fraud, 282, 283

Frazier-Lemke Act, 345

Frederick, Md., 222

Freedom of press, 424, 712

Freedom: Constitutional, 424

Freelooter: Defined, 190

Freemasonry, 716-17

Freer Gallery, 332

Freezing point: Water, 437

Freight, 730

Freight ton, 438

French and Indian War, 714

French Equatorial Africa, 592-93

Area & population, 589

French Guiana. See Guiana

French Guinea. See Guinea

French India. See India

French Morocco. See Morocco

French Pacific Settlements, 596

Area & population, 589

French Revolution, 712

French Somaliland. See Somaliland

French Sudan. See Sudan

French West Africa, 593-94

Area & population, 589

Frequency modulation:

Defined, 190

Invention, 443

Stations: by city, 238-47

Stations: U. S., 318

Fresno, Calif., 257

Frick Collection, 330

Friendly Islands. See Tonga

Friends (Quakers), 451

Fruit:

Consumption, 719

Exports & imports, 738

Income: marketing, 731

Prices, 731

Fuchs, Dr. Klaus, 209

Fuel:

Electricity source, 721

Price index, 719, 727

Production, 721, 722

See also Coal; Gas; Oil

Fujiyama, 624, 684, 689

Furies (myth.), 175

Furniture industry:

Establishments, 726

Furniture center of U. S., 223

Hours worked, 724

Price index, 727

Production index, 721

Sales, 727

Stores: leading, 728

Wages, 724

Furs: Imports, 738

## G

GI Bill of Rights, 364

Gabon, 589

Gadsden, Ala., 257

Gadsden Purchase, 259

Gainesville, Fla., 334

Galilee, Sea of, 617

Gallon: Defined, 436

Galveston, Tex., 257

Gambia, 536

Area & population, 526

Gambier, 596

Gambling:

Arrests, 282

Nevada, 225

Gandhi, Mohandas K., 209, 553-54

Ganges, 687

Garden City, Kans., 502

Gardner Museum, 334

Garfield, James A.:

Biography, 390

Cabinet, 403

Election, 372

Family, 397

Minority President, 428

Nomination, 370

Garner, John N., 375, 376

Gary, Ind., 219, 257

Gas industry:

Earnings & hours worked, 725

Kerr bill, 348

Price index, 719

Production, 722

Gases Laws of: Discovery, 444

Gasoline:

Exports, 738

Sales, 727

Stations: number, 726

Tax: by state, 321

General Accounting Office, 401

General Assembly. See United Nations

General Motors, 209, 210

General Sherman Tree, 215

Generals: Armed Forces, 358

Geneva, Switzerland, 662

Asian conference (1954), 211

Genoa, Italy, 704

Genocide: Defined, 190

Geodetic center: North America, 220

Geographic centers:

North America, 228

States, 214-38

United States, 220, 306

Geographical mile, 438

Geography:

U. S.: boundaries, 306

U. S.: coastline, 309

U. S.: highest & lowest points, 306, 307

U. S.: map, 154

U. S.: miscellaneous data, 306

U. S.: mountain peaks, 306

U. S.: National Park System, 328-30

U. S.: rivers, 308-09

World: caves & caverns, 691

World: deserts, 680

World: geysers, 691-92

World: highest & lowest points, 683

World: islands, 685

World: lakes, 688

World: mountain peaks, 684

World: oceans & seas, 685

World: rivers, 687-88

World: volcanoes, 689-90

World: waterfalls, 686

George VI (England), 210

George II (Greece), 602

George Washington Bridge, 702

Georgia:

General information, 218

Sherman's March, 711

Tornadoes (1936), 312

See also States

German Democratic Republic

(East Germany):

General information, 600-01

German Federal Republic (West

Germany):

General information, 598-600

NATO, 211

Peace contract (1952), 349

Western European Union, 211

See also Countries

German measles, 446

Germany:

General information, 597-602

Jewish persecution, 205

Occupation: plans, 408

Peace resolution (1951), 349

Reichstag building burned, 205

Rulers, 184

U.S.S.R.: nonaggression pact, 206

See also Countries; Hitler

Gestation periods of animals, 446

Gettysburg, Battle of, 711

Gettysburg Address, 428

Geysers, 691-92

Ghetto: Defined, 191

Gibraltar, 533

Area & population, 526

Gilbert and Ellice Islands, 562

Area & population, 526

Girl Scouts of the U. S. A., 717

Glacier National Park, 328

Glasgow, Scotland, 525

Glass industry:

Corning Glass Center, 333

Hours worked, 724

Production, 721

Wages, 724

Glass-Owen Bill, 343

Glass-Steagall Banking Act, 344

Glendale, Calif., 257

Gobbledygook: Defined, 191

Gobi Desert, 680

Gods & Goddesses, 173-81

Godwin Austen (mt.), 684

Goering, Hermann, suicide, 208

Gold:

Carat: defined, 438

Embargoed, 204

Gold Reserve Act, 345

Gold rush, 712

Production: world, 740

Value of dollar cut, 204

Gold Coast, 536

Area & population, 526

Gold standard: U. S. goes off, 204

Goldbrick: Defined, 191

Golden Gate Bridge, 702

Golf:

1956 champions, 872

Amateur, 788, 790

British champions, 789, 790

College, 790

Cups, 791

History, 787

Measurements, 823

Professional, 789

Public Links, 788

U. S. Open, 787

Good Friday, 461, 463, 464  
 Good-neighbor policy, 341  
 Googol: Defined, 191  
 Gorgons (myth.), 175  
 Gotland, 661  
 Government:  
   Changes in status, 211-12  
   Cities: mayors, etc., 249  
   States: employment, 724  
   States: governors, etc., 248  
   U. S.: education, 286  
   U. S.: employment, 724  
   U. S.: Executive Depts., 398-400  
   U. S.: expenditure, 734  
   U. S.: income, 731  
   U. S.: independent agencies, 400-01  
   U. S.: public debt, 735  
   U. S.: purchases, 718  
   U. S.: receipts, 734  
   U. S.: salaries, 397  
 Governors:  
   1956 elections, 22  
   First woman governor, 234  
   States: elected 1956, 22  
   States: names, 214-38  
   States: terms & salaries, 248  
 Governors General: Canada, 544  
 Graces (myth.), 175  
 Graduates, 286, 287  
 Graf Spree, 206  
 Grain:  
   Exports, 738  
   Imports, 738  
   Income: marketing, 731  
   Prices, 731  
 Gram: Defined, 435  
 Gran Chaco, 516-17  
 Grand Canyon National Park, 328  
 Grand Coulee Dam, 233, 701  
 Grand Forks, N. Dak., 228  
 Grand Island, Nebr., 225  
 Grand Junction, Colo., 502  
 Grand National Steeplechase, 840  
 Grand Rapids, Mich., 223  
   *See also* Cities (U. S.)  
 Grand Teton National Park, 328  
 Grant, Ulysses S.:  
   Biography, 389  
   Cabinet, 403  
   Elections, 372  
   Family, 397  
   Hall of Fame, 479  
   Nominations, 370  
   Tomb, 701  
 Grassroots: Defined, 191  
 Gravitation: Discovery of law of, 444  
 Gray-Snyder case, 714  
 Great Arabian Desert, 680  
 Great Australian Desert, 680  
 Great Britain (Isl.): Area, 685  
 Great Britain and Northern Ireland, United Kingdom of:  
   General information, 525-34  
   Church of England, 460  
   Destroyers from U. S., 207  
   Loan: U. S., 347  
   Nationalizes coal mines, 209  
   NATO, 213  
   Prime ministers, 182  
   Rulers, 181-82  
   SEATO, 213  
   Western European Union, 213  
   *See also* Countries  
 Great Falls, Mont., 224  
 Great Lakes, 688  
 Great Salt Lake, 232, 688  
 Great Salt Lake Desert, 680  
 Great Seal of U. S., 335

Great Smoky Mts. Natl. Park, 328  
 Great Wall of China, 712  
 Greece:  
   General information, 602-03  
   Aid bills: U. S., 347, 348  
   Ancient, 693  
   NATO, 213  
   *See also* Countries  
 Greek letters, 158-68  
 Greek mythology, 173-79  
 Greek Orthodox Church, 448  
 Greeley, Colo., 216  
 Greeley, Horace, 370, 372  
 Green Bay, Wis., 234  
 Greenback party, 372  
 Greenland, 579  
 Greensboro, N. C., 227, 257  
 Greenville, Miss., 223  
 Greenville, S. C., 230, 257  
 Greenwich, England, 487  
 Gregorian Calendar, 712  
 Gremlin: Defined, 191  
 Griffith Planetarium, 511  
 Groceries:  
   Sales, 727  
   Stores: leading, 728  
   Wholesale: establishments, 726  
   *See also* Food  
 Gross (meas.), 438  
 Gross national product, 718  
 Grounds for divorce, 265  
 Guadalupe Hidalgo, Treaty of, 713  
 Guadeloupe, 595  
   Area & population, 589  
 Guam, 237  
   Executions: method, 283  
   World War II, 207  
 Guatemala:  
   General information, 604  
   Volcanoes, 690  
   *See also* Countries  
 Guggenheim Memorial Foundation, 717  
 Guggenheim Museum, 330  
 Guiana, British, 542-43  
   Area & population, 526  
 Guiana, Dutch. *See* Surinam  
 Guiana, French, 595  
   Area & population, 589  
 Guinea, French, 589  
 Guinea, Portuguese, 652  
 Guinea, Spanish, 659  
 Gulf of Mexico. *See* Mexico, Gulf of  
 Gun cotton: Invention, 443  
 Gunpowder Plot, 712  
 Gustavus VI (Sweden), 660  
 Gutenberg: Printing, 443  
 Gymnastics, 869  
 Gyrocompass: Invention, 443  
 Gyroscope: Invention, 443

## — H —

Haakon VII, 640  
 Hagerstown, Md., 222  
 Hague, The, Netherlands, 636  
 Haile Selassie, 584  
 Haiti:  
   General information, 604-05  
   U. S. intervention, 358  
 Halicarnassus: Mausoleum, 682  
 Hall of Fame:  
   Baseball, 332, 783  
   Great Americans, 479  
 Halley's Comet, 507  
 Hambletonian, 849  
 Hamburg, Germany, 598  
 Hamilton, Alexander, 402

Duel with Burr, 712  
 Hamilton, Ohio, 257  
 Hamilton, Ontario, 543  
 Hammarskjöld, Dag, 754  
 Hammond, Ind., 257  
 Hammurabi, Code of, 711  
 Hand (meas.), 438  
 Hanford Engineer Works, 233  
 Hanging: States using, 283  
 Hanging Gardens, 682  
 Hanukkah, 463  
 Harding, Warren G.:  
   Biography, 393  
   Cabinet, 404  
   Election, 373  
   Family, 397  
   Nomination, 370  
 Hardware industry:  
   Establishments, 726  
   Hours worked, 724  
   Sales, 727  
   Wages, 724  
 Harmsworth Trophy, 851  
 Harness racing, 849-50  
 Harpers Ferry: Raid, 711  
 Harris-Fulbright bill, 351  
 Harrisburg, Pa., 229  
   *See also* Cities (U. S.)  
 Harrison, Benjamin:  
   Biography, 391  
   Cabinet, 404  
   Election, 372  
   Family, 397  
   Minority President, 428  
   Nominations, 370  
 Harrison, William Henry:  
   Biography, 386  
   Cabinet, 402  
   Election, 371  
   Family, 397  
 Hartford, Conn., 257  
   Wadsworth Atheneum, 335  
   *See also* Cities (U. S.)  
 Harvard Observatory, 511  
 Harvard University, 696  
 Harvest, Feast of, 462  
 Hashemite Kingdom. *See* Jordan  
 Hastings, Battle of, 712  
 Hastings, Nebr., 225  
 Hattiesburg, Miss., 223  
 Hauptmann, Bruno Richard, 209  
 Haute Volta, 593  
   Area & population, 589  
 Havana, Cuba, 574  
 Havre, Mont., 502  
 Hawaii:  
   General information, 235  
   Flood, 705  
   Statehood, 350  
   U. S. intervention, 358  
   Volcanoes, 689  
   *See also* States  
 Hawaii National Park, 328  
 Hawley-Smoot Tariff, 344  
 Hay-Bunau-Varilla Treaty, 344  
 Hay industry, 731  
 Hay-Pauncefote Treaty, 343  
 Hayden Planetarium, 511  
 Hayes, Rutherford B.:  
   Biography, 390  
   Cabinet, 403  
   Election, 372  
   Family, 397  
   Minority President, 428  
   Nomination, 370  
 Headline History of Our Times, 203-13  
 Health:  
   Services: employment, 725  
   WHO, 757  
 Health, Education and Welfare  
   U. S. Dept. of, 399-400  
   Secretaries, 405



- Heard Museum, 334  
 Heart disease: Death rates, 274  
 Heavy hydrogen: Discovery, 444  
 Hebrew letters, 158-68  
 Hebrides, 531  
 Hectare: Defined, 434  
 Hegira, 712  
 Hejaz, 656  
 Helena, Mont., 224, 502  
 Helicopters:  
   First, 482  
   First transatlantic flight, 482  
   Invention, 443  
   Leonardo da Vinci, 480  
   Records, 484  
   Types, 485-86  
 Heliocentric theory, 444  
 Helium:  
   Discovered on sun, 444  
   First used in balloons, 481  
 Hell Gate Bridge, 702  
 Helsinki, Finland, 585  
 Hemingway, Ernest: Crash, 210  
 Hercules: Labors of, 175-76  
 Heredity laws: Discovery, 444  
 Hermetic sealing, 443  
 Herron Museum, 334  
 Hess, Rudolph: Flight, 207  
 Hexagon: Area, 436  
 Hickok Award, 821  
 Hides. *See* Leather  
 High fidelity: Defined, 191  
 High schools. *See* Schools  
 Highways:  
   Construction, 720  
   Employment, 725  
   Legislation, 351  
 Hindenburg, Paul von, 204, 205  
 Hindenburg (zeppelin): Burns, 205  
 Hindus: Number, 447  
 Hirohito, 621, 622  
 Hiroshima, Japan, 208, 211  
 Hispanic Society, 330  
 Hispaniola: Area, 685  
 Hiss, Alger, 209  
 Historic Sites, National, 328, 330  
 Historical Parks, National, 328, 329  
 History:  
   Ancient empires, 693  
   Events: ancient to modern, 711-15  
   Explorations & discoveries, 681-82  
   First in America, 715-16  
   Headline History of Our Times, 203-11  
   Historical & news events, 711-15  
   United States, 336-42  
   *See also* Chronology  
 Hitler, Adolf:  
   Chancellor of Germany, 204  
   Munich beer hall putsch, 203  
   Death, 208  
   Dictator of Germany, 204  
   Wounded in bomb plot, 207  
 Hoboken, N. J., 257  
 Hockey, 213  
   1956 champions & records, 855-56, 863  
   Hall of Fame, 813  
   History, 813  
   Measurements, 823  
   Stanley Cup, 813  
 Hogs:  
   Prices: farm, 731  
   Production: U. S., 732  
   Production: world, 742  
   Hogshead (meas.), 438  
 Hokkaido: Area, 685  
 Holidays:  
   American countries, 703  
   Flag display, 431-32  
   Legal holidays, 464  
   Religious & secular, 461-63  
   Holland. *See* Netherlands  
   Holly: Christmas, 463  
   Hollywood Gold Cup, 841  
   Holy Alliance, 712  
   Holy Roman Empire, 712  
   Holy Saturday, 463  
   Holyoke, Mass., 257  
   Home Owners Refinancing Act, 344  
   Homes. *See* Housing  
   Homestake (mine), 230  
   Homicides, 282  
   Honduras:  
   General information, 605-06  
   *See also* Countries  
   Honduras, British, 543  
   Area & population, 526  
   Hong Kong, 551-52  
   Area & population, 526  
   Typhoon (1906), 706  
   Honolulu, Hawaii, 235, 502  
   Honshu: Area, 685  
   Hood, Mt., 684  
   Hood (warship), 207  
   Hooperating: Defined, 191  
   Hoover, Herbert:  
   Biography, 393-94  
   Cabinet, 405  
   Election, 374  
   Family, 397  
   Nominations, 370  
   Hoover Dam, 701  
   Hoquiam, Wash., 502  
   Horse racing, 830-46  
   1956 champions & records, 858  
   History, 836  
   Horses, leading money winners, 847  
   Jockeys: leading, 847  
   Man O'War: record, 846  
   Owners: leading money winners, 847  
   Stakes: winners, 837 45  
   Thoroughbred Racing Assns., 846  
   Tracks: number, 729  
   Trainers: leading, 847  
   Triple Crown, 840  
   Wagering, 845  
   Horse show, 880  
   Horsepower: Defined, 438  
   Horses: On farms, 732  
   Horseshoe pitching, 871  
   Horthy, Adm. Nicholas, 606, 607  
   Hospitals:  
   Construction, 720  
   Employment, 725  
   Number, 278  
   Hot rod: Defined, 191  
   Hot Springs, Ark., 215, 502  
   Hot Springs National Park, 328  
   Hotels:  
   Hours worked, 725  
   Number, 729  
   Wages, 725  
   House of Representatives:  
   Apportionment, 417, 425  
   Committees, 24  
   Composition, 417  
   First woman member, 716  
   Members: list of, 25-27  
   President elected by, 425  
   Qualifications, 417  
   Salaries, 350, 397  
   Shooting (1954), 210  
   Speakers, 407  
   Terms, 417  
   Terms: end of, 427  
   Households: U. S., 270  
   Housing:  
   Construction, 345-51  
   Consumer spending, 719  
   HHFA, 400  
   Legislation, 344-51  
   Price Index, 719  
   Houston, Tex.:  
   General information, 241  
   *See also* Cities (U. S.)  
   Howland Island, 236  
   Huckster: Defined, 191  
   Hudson Bay, 685  
   Hudson River, 338  
   Hughes, Charles E.:  
   Nomination for President, 370  
   Secretary of State, 404, 405  
   Supreme Court, 406  
   Vote for President, 373, 381  
   Huguenots, 712, 714  
   Humidity, 312-14  
   Hundred Years' War, 587  
   Hungary:  
   General information, 606-08  
   Mindszenty sentenced, 209  
   Revolt as satellite, 17-19  
   *See also* Countries  
   Huntington, W. Va., 233, 257  
   Huntington Library, 334  
   Huron, Lake, 688  
   U. S.: water area, 309  
   Huron, S. Dak., 230  
   Hurricanes, 310-11, 706  
   Paths: maps, 152-53  
   Hutchinson, Kans., 220  
   Hwang Ho, 687  
   Hydrogen bomb, 209, 210  
   Truman orders, 209  
   U.S.S.R. explodes, 210  
   Hydroplane: Invention, 443  


---

   Ice hockey. *See* Hockey  
   Ice skating, 819, 820  
   Iceland:  
   General information, 608-09  
   Geysers, 691  
   Volcanoes, 689  
   *See also* Countries  
   Idaho:  
   General information, 218-19  
   *See also* States  
   Idaho Falls, Idaho, 218, 502  
   Ifni, 659  
   Illinois:  
   General information, 219  
   Tornado (1925), 706  
   *See also* States  
   Illinois State Museum, 334  
   Immigration:  
   Alien Registration Act, 346  
   Displaced persons, 347  
   Immigrants: number, 343, 344  
   Laws: violators, 283  
   Legislation, 343-50  
   Literacy test, 343  
   Persons barred, 343  
   Quotas, 343, 344, 350  
   Racial bars ended, 349  
   Refugee Act, 350  
   To U. S.: by country, 254  
   To U. S.: by year, 253  
   Impeachments, 406  
   Imports:  
   Countries: by year, 739-40  
   Countries: leading, 743

**Imports—(cont.)**

- U. S.: by commodity, 738
- U. S.: by year, 739-40
- "In God We Trust," 335
- Inauguration date, 369
- Incandescent lamp: Invention, 443
- Income:**
  - Agricultural, 731
  - Insurance companies, 730
  - National, 718
  - Per capita: by state, 733
- Income tax:**
  - Federal: collections, 734
  - Federal: established, 426
  - Federal: tables, 744-47
  - Federal: violators, 283
- Incubation period of animals, 446
- Independence, Declaration of,** 413-15
- Independence Day,** 462, 464
- Independence Hall,** 701
- Independence party,** 373
- India:**
  - General Information, 553-56
  - Cyclones, 706
  - Earthquakes, 705
  - Map, 145
  - See also Countries
- India, French,** 596
- India, Portuguese,** 653
- Area & population, 651
- Indian Ocean,** 685
- Indiana:**
  - General information, 219
  - Tornado (1925), 706
  - See also States
- Indianapolis, Ind.:**
  - General information, 241
  - Auto race, 854
  - See also Cities (U. S.)
- Indians, American:**
  - Births, 269
  - Education, 286
  - Museum exhibits, 330-35
  - Population, 214
  - Reservation: largest, 226
  - Reservations: leading, 260
  - Schools: Federal, 289
- Indo-China:**
  - General information, 596
  - Map, 141
  - Typhoon (1952), 706
  - See also Vietnam
- Indo-Chinese War,**
- Indonesia:**
  - General information, 609-11
  - Krakatoa explosion, 690
  - Volcanoes, 690
  - See also Countries
- Induction: Electric,** 444
- Indus,** 687
- Industrial Revolution,** 713
- Industry:**
  - Construction, 720
  - Countries: leading, 743
  - Employment, 724
  - Establishments, 722, 726, 729
  - Failures: number, 722
  - Hours worked, 724, 725
  - Production: West Europe, 723
  - Production indexes, 721, 743
  - Schools, 287
  - Wages, 724, 725
  - Workers: number, 260
- Infant mortality,** 273
- Infantile Paralysis, National**
  - Foundation for, 717
- Influenza: Death rates,** 274
- Information Agency, U. S.,** 401

**Information Bureaus: Sports,**

- 772
- Information Please,** 715
- Ingathering, Feast of,** 462
- Iniini. See** Guiana, French
- Inquisition,** 713
- Insignia: Armed forces,** 359
- Installment buying,** 719
- Insulin: Discovery,** 444
- Insurance:**
  - Companies, 730
  - "Insurance Capital," 216
  - Life insurance, 722
  - Social Security, 747-51
  - Survivors' Insurance, 748, 749
  - Unemployment insurance, 750-51
- Insured mail,** 367
- Intelligence testing,** 444
- Intercollegiate conference**
  - team champions, 862
- Interest:**
  - Money & interest rates, 735
  - Public debt, 734
  - Simple interest, 437
- Inter-Governmental Maritime**
  - Consultative Organization, 756
- Interior, U. S. Dept. of,** 399
- Education: funds, 286
- Secretaries, 403-05
- Internal Security Act of 1950,** 349
- International Bank,** 756
- Loans, 736
- International Civil Aviation Or-**
  - ganization, 756
- International court,** 757
- First meeting, 208
- International date-line,** 488
- International Folk Art, Museum**
  - of, 334
- International Labour Organisa-**
  - tion, 756-57
- International Monetary Fund,** 757
- International Refugee Organiza-**
  - tion,
- International Telecommunication**
  - Union, 757
- International Trade Organiza-**
  - tion, 757
- Internationals,** 713
- 3rd dissolved, 207
- Interstate commerce:**
  - ICC, 400-01
  - Legislation, 346
  - Thefts, 283
- Inventions,** 443-44
- Iowa:**
  - General information, 219-20
  - See also States
- Iran:**
  - General information, 611-12
  - Aid: legislation, 348
  - Flood, 705
  - See also Countries
- Iraq:**
  - General information, 613-14
  - See also Countries
- Ireland:**
  - General information, 614-15
  - See also Countries
- Ireland (Isl.): Area,** 685
- Ireland, Northern,** 532-33
- See also Great Britain
- Irish Free State. See** Ireland
- Iron Curtain:**
  - Countries: map, 136-37
  - Defined, 191

**Iron industry:**

- Exports, 738
- Hours worked, 724
- Imports, 738
- Production: U. S., 722
- Production: world, 741
- Wages, 724
- Irrawaddy,** 688
- Irrington, N. J.,** 257
- Islam. See** Mohammedanism
- Islands: Areas,** 685
- Isle of Man,** 533
- Area & population, 526
- Isle Royale National Park,** 321
- Isotopes, 441-42,** 444
- Israel:**
  - General information, 616-18
  - Egypt, 15-17
  - See also Countries; Palest-
  - ine
- Israel (ancient): Kings,** 171-7
- Istanbul, Turkey,** 666
- Italian Somaliland. See** Somali-
- Italy:**
  - General information, 618-21
  - Corfu, 203
  - Ethiopian war, 205
  - Volcanoes, 689
  - Western European Union, 213
  - See also Countries
- Ivory Coast,** 593
- Area & population, 589
- Iwo Jima,** 238
- World War II,** 208

— J —

**Jackson, Andrew:**

- Biography, 385-86
- Cabinet, 402
- Elections, 371
- Family, 397
- Hall of Fame, 479
- Jackson, Mich., 257
- Jackson, Miss., 223, 257
- Jackson, Tenn., 231
- Jacksonville, Fla.:**
  - General information, 241-4
  - See also Cities (U. S.)
- Jakarta, Indonesia,** 609-704
- Jamaica,** 548
- Area & population, 526
- Jamestown, N. Dak.,** 228
- Jamestown, Va.,** 232, 713
- Jan Mayen Island,** 642
- Volcano, 689
- Japan:**
  - General information, 621-24
  - Anti-Comintern treaty, 20
  - China: invasion of, 205
  - Earthquake (1923), 705
  - Exploration, 681
  - Floods, 705
  - Hurricane (1934), 706
  - Surrender: terms, 409-10
  - Treaty, 412
  - Typhoon (1954), 706
  - Volcanoes, 689
  - See also Countries
- Japan, Sea of,** 685
- Japanese (U. S.),** 252, 269
- See also Nonwhite races
- Jarvis Island,** 236
- Java,** 609
- Area, 610, 685
- Landslide (1955), 705
- Volcanoes, 690
- Jefferson, Thomas:**
  - Biography, 383-84
  - Cabinet, 402
  - Elections, 371

Family, 397  
Hall of Fame, 479  
Jefferson City, Mo., 224  
Jehovah's Witnesses, 451  
Jersey (isl.), 533  
Jersey City, N. J.:  
  General information, 242  
  *See also* Cities (U. S.)  
Jerusalem, 616, 624, 713  
Jesuits: Founded, 713  
Jesus Christ:  
  Ascension, 462  
  Crucifixion, 711  
Jet propulsion:  
  Airplane flights, 482  
  Ancient Greeks, 480  
  Defined, 192  
Jets, 67-80  
Jewelry:  
  Birthstones, 182  
  Carat: defined, 438  
  Consumer spending, 719  
Jewish months, 158-68  
Jewish Museum, 330  
Jewish New Year, 462  
Jews:  
  Deprived of German citizenship, 205  
  Holidays, 461-63  
  "Jewish race," 445  
  Nazi persecution, 204, 205  
  Number, 447, 451  
  Organizations, 461  
  Russian physicians arrested, 210  
Jive: Defined, 192  
Joan of Arc, 713  
Johns Hopkins Hospital, 222  
Johnson, Andrew:  
  Biography, 389  
  Cabinet, 403  
  Family, 397  
  Impeachment, 406  
  Johnston Island, 237  
  Johnstown, Pa., 257  
  Joint Chiefs of Staff, 399  
  Joliet, Ill., 257  
  Jordan (kingdom), 624-25  
  *See also* Countries  
Jordan (river), 617  
Journalism: Pulitzer Prizes, 470-72  
  *See also* Newspapers  
Judah: Ancient kings, 171  
Judges: International Court, 757  
Judiciary Act, 346  
Julian Calendar, 712  
Juneau, Alaska, 234  
Jupiter (god): Statue, 682  
Jupiter (planet), 509  
  Symbol, 503  
Jury trial, 424  
Justice, U. S. Dept. of, 399  
  Attorneys General, 402-05  
  Education: Funds, 286  
Justices:  
  Supreme Court, 406  
  Supreme Court: salaries, 397  
Justinian Code, 713  
Jutland, Battle of, 715  
Juvenile delinquency, 283

## K

K2, 684  
Kalamazoo, Mich., 257  
Kamchatka: Volcanoes, 689  
Kanchenjunga, 684  
Kansas:  
  General information, 220

*See also* States  
Kansas City, Kans., 220, 257  
Kansas City, Mo., 224  
  General information, 242  
  *See also* Cities (U. S.)  
Kansas-Nebraska Act, 338, 713  
Kapp Putsch, 203  
Kashmir, 554  
Keating-Owen Act, 343  
Kellogg-Briand Pact, 204, 344  
Kellogg Foundation, 717  
Kelly, Grace: Marriage, 633  
Kenosha, Wis., 257  
Kentucky:  
  General information, 220-21  
  *See also* States  
Kentucky Derby, 841  
Kentucky Lake, 221  
Kenya, 535  
  Area & population, 526  
Kerr Bill, 348  
Ketchikan, Alaska, 234  
Key, Francis Scott, 430  
Key West, Fla., 502  
Keynesian: Defined, 192  
Kharkhov, U.S.S.R., 668  
Khojak Pass, 513  
Khrushchev, Nikita, 670, 671  
Khyber Pass, 513  
Kickback: Defined, 192  
Kidnappings:  
  Lindbergh baby, 205  
  Prisoners, 283  
Kiev, U.S.S.R., 668  
Killmanjaro, 684  
Killarney, Lakes of, 615  
Kilogram: Defined, 435  
Kindergarten: Enrollments, 285  
Kinescope: Defined, 192  
King James Version of Bible, 711  
Kingman Reef, 237  
Kings:  
  England, 181-82  
  France, 183  
  Israel & Judah, 171-72  
  Prussia, 184  
Kings Canyon National Park, 328  
Kings Point, N. Y., 356  
Kingston, Ont., 502  
Kiwanis International, 717  
Klamath Falls, Oreg., 502  
Knights of Columbus, 717  
Knights of Pythias, 717  
Knot (meas.), 438  
Know-Nothing party, 372  
Knoxville, Tenn., 231, 257  
Kodak: Invention, 443  
Korea:  
  General information, 625-26  
  Aid: legislation, 348  
  *See also* Countries  
Korean War:  
  Casualties, 362  
  Events, 209-11  
  Veterans: benefits, 349  
Krakatoa, 690  
Kremlin (bldg.), 699  
Kurile Islands: Volcanoes, 689  
Kuwait, 514

## L

Labor:  
  Antitrust laws, 343  
  Children, 343, 346  
  Closed shops: prohibited, 347  
  Employment, 724, 733

Escalator clause, defined, 190  
Featherbed rule, 190  
FMCS, 400  
Hours worked per week, 724, 725  
ILO, 756-57  
Injunctions: limited, 344  
Labor force, 260, 261  
Legislation, 343-51  
Lockouts: number, 725  
NLRB, 345  
Purchasing power, 720  
Railroads: hours, 343  
Strikes, 725  
Taft-Hartley Act, 347, 349  
Unemployment, 724  
Unemployment: compensation, 750-51  
Unions: leading, 726  
Wages, 724, 725  
Wages: legislation, 345-51  
Wagner-Connery Act, 345  
Women, 261  
Working population: U. S., 260  
Worktime needed to buy food, 720  
Yellow-dog contracts: outlawed, 344  
Labor, U. S. Dept. of, 399  
  Secretaries, 404-05  
Labor Day, 462, 463, 464  
Labors of Hercules, 176  
Labrador, 681  
Lacquer. *See* Paint  
Lacrosse, 808, 869  
Lake Champlain, Battle of, 715  
Lake Charles, La., 221  
Lake Erie, Battle of, 715  
Lakes:  
  Highest lake, 216, 522  
  Large lakes, 688  
  Largest man-made lake, 221  
Lakewood, Ohio, 257  
Lamb: Prices, 731  
"Lame Duck Amendment," 426-27  
Lamps: Inventions, 443  
Lancaster, Pa., 257  
Land:  
  Arable, 742  
  Farm, 731  
"Land of 10,000 Lakes," 223  
Lander, Wyo., 502  
Landon, Alfred M., 376  
Languages, 694  
Lansing, Mich., 222, 257  
Laos:  
  General information, 626-27  
  *See also* Countries  
Laramie, Wyo., 234  
Larceny, 282  
Laredo, Tex., 257  
Lassen Peak, 690  
Lassen Volcanic National Park, 328  
Las Vegas, Nev., 225  
Lateran Treaty, 675  
Latin America: Population, 250  
Latitudes: Cities, 501-02  
Latter-day Saints, 451  
Latvia:  
  General information, 627  
  *See also* Union of S.S.R.  
Laundries:  
  Earnings & hours worked, 725  
  Number, 729  
Lawn bowling, 879  
Lawn tennis, 792-94, 823



Lawrence, Mass., 257

# Laws:

Divorce: by state, 264-65  
How bills become, 352  
Marriage: by state, 263  
Motor-vehicle: by state, 321  
Passed by Congress, 343-51  
School-attendance, 285

Lawton, Okla., 228

Layton Art Collection, 334

# Lead:

Imports, 738  
Production: U. S., 722  
Production: world, 741  
League (meas.), 438  
League of Nations:

Dissolved, 208  
Established, 203  
Germany quits, 204  
Italy quits, 205  
Japan quits, 204  
Members, 753  
U.S.S.R. expelled, 206  
World Court, 344, 345

Leaning Tower of Pisa, 699

# Leather industry:

Hours worked, 724  
Prices, 727  
Production, 721  
Wages, 724

# Lebanon:

General information, 627-28  
*See also* Countries

Lee, Robert E., 479

Leeds, England, 525

Leeward Islands, 548

Area & population, 526

# Legal holidays,

Legislatures: Statistics, 248

Leipzig, Germany, 600

Battle of, 713

Lend-Lease Act, 346

Length: Measures, 434

Lenin, Nikolai, 203, 669

Leningrad, U.S.S.R., 704

Libraries, 696

Museum, 697

Lens: Bifocal, 443

Lent, 461

Leopold-Loeb case, 713

Lesbos, 603

Lesser Antilles, 689

Lesser Sunda Islands, 690

# Lethal gas:

First state to use, 225

States using, 283

# Letters:

Greek, 158-68

Hebrew, 158-68

Lewis, John L., 209

Lewis and Clark expedition, 681

Lewiston, Idaho, 218

Lewiston, Maine, 221

Lexington, Ky., 220

Lexington-Concord, Battle of, 711

Laye (carrier), 706

# Liberia:

General information, 628-29

*See also* Countries

Liberty, Statue of, 415

Liberty Bell, 229, 354

Liberty party, 375

# Libraries:

Books: postal rate, 366

Colleges, 697

First circulating library, 715

Library of Congress, 401

United States, 696-97

World, 696-97

# Libya:

General information, 629

# *See also* Countries

Licenses: Automobile, 321

Lick Observatory, 511

Lidice, Czechoslovakia, 207

Lie, Trygve, 754

# Liechtenstein:

General information, 629-30

*See also* Countries

# Life expectancy:

Selected countries, 281

U. S., 278-80

Life insurance. *See* Insurance

# Light:

Electromagnetic theory, 444

Velocity, 510

Velocity: discovery, 444

Light-year: Defined, 438

"Lighthouse of Mediterranean," 689

Lightning rod: Invention, 443

Lights, Festival of, 463

Lima, Ohio, 257

Lincoln, Abraham:

Biography, 388-89

Birthday (holiday), 461, 464

Burial place, 219

Cabinet, 403

Elections, 372

Emancipation Proclamation, 711

Family, 397

Gettysburg Address, 428

Hall of Fame, 479

Lincoln Memorial, 701

Minority President, 428

Mt. Rushmore carving, 230

Nominations, 370

Lincoln, Nebr., 225

Lindbergh, Charles A.:

Atlantic flight, 713

Kidnap case, 205

Link (meas.): Defined, 438

Linotype machine: Invention, 443

Lions Clubs, 717

# Liquor:

Consumer spending, 719

Employees: state, 725

Establishments, 726

Imports, 738

Laws: violators, 282, 283

Legislation, 343, 344

Prohibition, 343

Repeal, 427

Sales, 727

States prohibiting, 224, 229

3.2 wine & beer, 344

Volstead Act, 343

Lisbon, Portugal, 649

Earthquake, 705

Museum, 698

Liter: Defined, 435

# Literacy tests:

Immigrants, 343

Voting applicants, 382

# Literature:

Nobel Prizes, 465-66

Pulitzer Prizes, 472-74

Lithography: Invention, 443

# Lithuania:

General information, 630

*See also* Union of S.S.R.

Little Big Horn, Battle of, 231

Little Colorado River, 308

Little Rock, Ark., 215

*See also* Cities

Liverpool, Eng., 525

Museums, 698

Livestock: On farms, 731

# Loans:

Commercial rates, 735

International Bank, 736

Veterans, 364

Lobotomy: Defined, 192

Locarno Conferences, 713

Lockouts: Number, 725

Locksmith shops: Number, 729

Loeb-Leopold case, 713

Logan, Utah, 232

Logan International Airport, 222

London, England:

British Museum, 696, 697

Fire, 706

Museums, 697, 698

Plague, 713

Zoo, 699

*See also* Cities (world)

London, Ont., 502

London Economic Conference, 204

London Naval Pact, 204

Long, Huey, 205, 354

Long Beach, Calif.:

General information, 242

*See also* Cities (U. S.)

Long Island: Map, 152-53

Long Island, Battle of, 711

Long Island Sound, 309

Longevity: Animals, 446

Longitudes: Cities, 501-02

Longs Peak, 684

Lookout Mountain, Battle of, 711

Lorain, Ohio, 257

Lords, House of. *See* Parliament

Los Alamos, N. Mex., 226

Los Angeles, Calif.:

General information, 242

Planetarium, 511

*See also* Cities (U. S.)

Louis XVI: Beheaded, 713

Louis, Joe: Record, 805

# Louisiana:

General information, 221

*See also* States

Louisiana Purchase, 259

Louisville, Ky., 220

General information, 242-43

*See also* Cities (U. S.)

Louvre, 697

Lowell, Mass., 257

"Lowell of the South," 218

Lower California, 632

Loyalty Islands, 597

Loyalty oath: Defined, 192

Lubbock, Tex., 257

# Lumber industry:

Establishments, 726

Hours worked, 724

Prices, 727

Production, 721, 723

Sales, 727

Wages, 724

Luray Cavern, 691

Lusitania (sdp), 710

Luther, Martin, 597, 714

Lutheran Churches, 449

# Luxemburg:

General information, 630-31

*See also* Countries

Luzon: Area, 685

Lynn, Mass., 257

Lysenkoism, 192

# — M —

Macao, 653

Area & population, 651

MacArthur, Douglas, 207, 209,

210

McCarran-Walter Immigration

Bill, 349

McCarthy, Joseph R., 209, 211

McClellan, George B., 370, 372

Machine gun: Invention, 443

- Machinery Industry:**  
 Establishments, 726  
 Exports, 738  
 Hours worked, 724  
 Imports, 738  
 Prices, 727  
 Production, 721  
 Wages, 724
- McKeesport, Pa., 257**
- McKinley, William:**  
 Biography, 391  
 Cabinet, 404  
 Elections, 372  
 Family, 397  
 Nominations, 370
- McKinley, Mt., 684**
- Macon, Ga., 218, 257**
- Madagascar, 594**  
 Area & population, 589
- Madeira, 651**
- Madison, James:**  
 Biography, 384  
 Cabinet, 402  
 Elections, 371  
 Family, 397  
 Hall of Fame, 479
- Madison, Wis., 234, 257**
- Madrid, Spain, 657**  
 Library, 696  
 Museum, 697  
 Surrender, 206
- Madura, 609, 610**
- Magazines:**  
 Advertising, 729  
 Leading magazines, 318
- Magellan: Voyage, 682**
- Magna Carta, 713**
- Magnetic declinations, 502**
- Magnum: Defined, 438**
- Magsaysay, Ramon, 645**
- Mail: Regulations, 365-68**
- Mail-order houses:**  
 Leading, 728  
 Sales, 727
- Maine:**  
 General information, 221  
*See also States*  
 Maine (battleship), 714  
 Maize. *See Corn*
- Majorca, 659**
- Majority: Defined, 382**
- Malayan Federation:**  
 General information, 552  
 Area & population, 526  
*See also Countries*
- Malden, Mass., 257**
- Maldiv Islands, 631**
- Malenkov, Georgi M., 670**
- Males. *See Men***
- Malta, 533-34**  
 Area & population, 526
- Mammoth Cave, 221, 328, 691**
- Mammoth Hot Springs, 692**
- Man, Isle of, 526, 533**
- Manchester, Eng., 525**
- Manchester, N. H., 225, 257**
- Manchukuo, 204**
- Manchuria, 705**  
 Japanese invasion, 204
- Mandalay, Burma, 564**
- Manganese:**  
 Imports, 738  
 Production, 741
- Manhattan:**  
 Area & population, 258  
 Borough president: name, 244  
 Island purchased, 713  
*See also New York, N. Y.*
- Manila, Philippines, 646**
- World War II, 208**
- Manitoba, Lake, 688**
- Manitoba (province), 545**
- Manslaughter, 282**
- Manufacturing:**  
 Airplanes, 485, 486  
 Employment, 724, 733  
 Establishments, 724, 733  
 Exports, 738  
 Hours worked, 724  
 Imports, 738  
 Plant & equipment expenditure, 723  
 Production indexes, 721  
 Wages, 724
- Mao Tse-tung, 568**
- Maps:**  
 Africa, 147  
 Airbases, 134-37, 144  
 Alaska, 148  
 Asia, 140-41  
 Austria, 157  
 Canada, 148  
 Canal Zone, 149  
 Central America, 149  
 Europe, 138-39  
 Far East, 142-43  
 Formosa, 142  
 France, 156  
 Great Britain, 155  
 Hawaii, 143  
 Hurricane paths: U. S., 152-53  
 India, 145  
 Iron Curtain countries, 137  
 Italy, 157  
 Long Island, 152-53  
 Middle East, 139, 144  
 NATO countries, 136-37  
 Near East, 139, 144  
 North America, 148-49  
 Northern Hemisphere, 134-35  
 Oceania, 142-43  
 Pacific region, 142-43  
 Panama Canal, 149  
 Portugal, 156  
 South America, 146  
 Spain, 156  
 Switzerland, 157  
 U. S., 150-51  
 U. S.: time zones, 154  
 West Indies, 149
- Marco Polo, 681**
- Marconi, Guglielmo, 443**
- Mardi Gras, 461, 464**
- Margarine: Consumption, 719**
- Mariana Islands, 237, 238**
- Marie Antoinette: Beheaded, 712**
- Marihuana, 283**
- Marine Corps (U. S.):**  
 Allowances, 362  
 Casualties, 362  
 Commandant, 399  
 History, 357  
 Insignia, 359  
 Military actions, 358  
 Officers, 358-59  
 Pay, 359-62  
 Personnel: by year, 363  
 Ranks, 359-60
- Marine Historical Assn., 334**
- Maritime Commission, 286**
- Marne, Battles of, 715**
- Marquesas Islands, 596**
- Marriages:**  
 First: median age, 266  
 Laws: by state, 263  
 Married couples: number, 270  
 Married persons: deaths, 274  
 Married persons: number, 262  
 Number: by state, 263  
 Number & rates: by year, 261
- Per cent of population ever married, 266**
- Prospects, 266**
- Remarriage after divorce, 264**
- Mars (planet), 509**  
 "Attack" (1938), 206  
 Symbol, 503
- Marshall Islands, 238**
- Marshall Plan, 208-09, 348**
- Martinique, 595**  
 Area & population, 589  
 Volcano, 689
- Mary, Queen of Scots, 713**
- Maryland:**  
 General information, 222  
*See also States*
- Masaryk, Jan: Death, 209**
- Mason and Dixon's Line, 184**
- Masons (assn.), 716-17**
- Masqat. *See Oman***
- Mass: Units, 435**
- Mass of the Presanctified, 461**
- Massachusetts:**  
 General information, 222  
*See also States*
- Massachusetts Handicap, 841**
- Massive, Mt., 306, 684**
- Match: Invention, 443**
- Maternal mortality, 274**
- Mathematics, 435-39**
- Mathematics section, 28-52**
- Matter: Conversion to energy, 436**
- Matterhorn, 684**
- Mau Mau, 535**
- Mauna Kea, 235, 689**
- Mauna Loa, 684, 689**
- Maundy Thursday, 463**
- Mauretania (ship), 710**
- Mauritania, 593**  
 Area & population, 589
- Mauritius, 536-37**  
 Area & population, 526
- Mausoleum at Halicarnassus, 682**
- Maximilian: Executed, 713**
- Mayflower (ship), 429**
- Mayflower Compact, 429**
- Mayors:**  
 Names, 238-47  
 Terms & salaries, 249
- Mc. *See Mac***
- Mean (math.): Defined, 439**
- Measles, 446**  
 Death rates, 274
- Measurement ton, 438**
- Measures:**  
 Defined, 434-39  
 Sports, 823
- Meat:**  
 Consumption, 719  
 Exports & imports, 738  
 Income: marketing, 731  
 Prices: farm, 731  
 Production: world, 742  
 Rationing, 207  
 Wholesale: establishments, 726
- Medford, Mass., 257**
- Medford, Oreg., 229**
- Median: Defined, 439**
- Medical care:**  
 Consumer spending, 719  
 Price index, 719  
 Veterans, 364
- Medicine:**  
 Discoveries, 444  
 Diseases, 446  
 Hospitals, 278  
 Nobel Prizes, 466-69
- Mediterranean Sea, 685**
- Meetings: How to conduct, 126-33**

- Megaton: Defined, 192  
 Mekong, 687  
 Melbourne, Australia, 557  
 Melting points: Chemical elements, 441-42  
 Melville (Isl.): Area, 685  
 Memorial Day, 462, 464  
 Memorial Park, National, 328, 329  
 Memorials, National, 328, 330  
 Memphis, Tenn., 231  
   General information, 243  
   *See also* Cities (U. S.)  
 Men:  
   College graduates, 287  
   Death rate: by age & year, 272  
   Deaths, 272, 274, 278-79  
   Life expectancy, 278-79  
   Marital status, 262  
   Marriage, 266  
   Number, 253  
   Number: per 100 females, 252  
 Mendel laws: Discovery, 444  
 Meningitis, 446  
 Mennonites, 451  
 Mental deficiencies, Education, 286  
 Merchant fleets, 743  
 Merchant Marine Academy, U. S., 356  
 Mercury (planet), 509  
   Symbol, 503  
 Mercury-vapor lamp, 443  
 Mercy killing: Defined, 192  
 Meridian, Miss., 223  
 Merrimac (ship), 713  
 Mesa, Ariz., 214  
 Mesa Verde National Park, 328  
 Mesabi Range, 223  
 Mesopotamia, 613  
 Messina, Strait of, 620  
 Metals industry:  
   Countries: leading, 740-41  
   Establishments, 726  
   Exports, 738  
   Hours worked, 724  
   Imports, 738  
   Prices, 727  
   Production, 721, 722  
   Wages, 724  
 Meteors, 510  
 Meter (meas.): Defined, 434  
 Methodism:  
   Churches, 449  
   Founded, 460  
 Methodist Church, Tho., 449  
   Bishops, 453  
 Metric system, 434-35  
 Metropolitan Museum, 331  
 Meuse Argonne, Battle of, 715  
 Mexican Cession, 259  
 Mexican War, 362, 713  
 Mexico:  
   General information, 631-33  
   Conquest, 681  
   U. S. intervention, 358  
   Volcanoes, 690  
   *See also* Countries  
 Mexico, Gulf of:  
   Coast line: U. S., 309  
   Dimensions, 685  
   U. S.: water area, 309  
 Mexico City, Mexico, 704  
 Miami, Fla., 218  
   General information, 243  
   *See also* Cities (U. S.)  
 Miami Beach, Fla.: Climate, 313  
 Michigan:  
   General information, 222-23  
   *See also* States  
 Michigan, Lake, 688  
   First navigated, 681  
   U. S.: water area, 309  
 Micron: Defined, 438  
 Microscope: Invention, 443  
 Mid-Canada Line, 148  
 Middle Ages: Universities, 694-95  
 Middle Atlantic States:  
   Economy: statistics, 733  
   Population: marital status, 262  
 Middle Congo, 593  
   Area & population, 589  
 Middle East:  
   Crisis, 15-17  
   Maps, 139, 144  
 Middle East Treaty Organization, 213  
 Midway, 237  
   World War II, 207  
 Mikhailovic, Gen. Drija, 207  
 Mil (meas.): Defined, 438  
 Milan, Italy, 618  
 Mile runs, 826, 830  
 Mileages between cities, 322-27  
 Military Academy (U. S.), 355  
   Government funds, 286  
 Military assistance. *See* Foreign Aid  
 Military forces. *See* Armed forces  
 Military Parks, National, 328, 329  
 Military reserve bill, 351  
 Milk industry:  
   Consumption, 719  
   Prices, 731  
   Production: world, 742  
 Milky Way, 506  
 Millimicron: Defined, 438  
 Milwaukee, Wis., 234  
   General information, 243  
   *See also* Cities (U. S.)  
 Mindanao: Area, 685  
 Mindszenty, Cardinal, 209  
 Minerals: *See* Coal; Metals  
 Ming Dynasty, 713  
 Mining:  
   Employment, 724  
   Establishments, 722  
   Hours worked, 725  
   Wages, 725  
 Minneapolis, Minn., 223  
   General information, 243  
   *See also* Cities (U. S.)  
 Minnesota:  
   General information, 223  
   *See also* States  
 Minnesota River, 308  
 Minority Presidents, 428  
 Minot, N. Dak., 228  
 Mint Museum of Art, 334  
 Miquelon. *See* St. Pierre  
 Missiles, 67-80  
 Mississippi:  
   General information, 223-24  
   Tornadoes (1936), 706  
   *See also* States  
 Mississippi River, 308  
   Discovery, 681  
   Floods, 706  
 Missoula, Mont., 224  
 Missouri:  
   General information, 224  
   *See also* States  
 Missouri Compromise, 713  
 Missouri River, 308  
 Mistletoe: Christmas, 463  
 Mobile, Ala., 257  
 Mohammed: Hegira, 712  
 Mohammedans, 447  
 Mohave Desert, 680  
 Molecular hypothesis, 444  
 Molotov cocktail: Defined, 192  
 Moluccas, 609  
 Momism: Defined, 192  
 Monaco, 633  
 Money:  
   And interest rates, 735  
   Currency: par values, 737  
   In circulation, 735  
   Monetary Fund, 757  
   Portraits on bills, 271  
   *See also* Banks  
 Money orders, 366  
 Mongolia, 681  
 Mongolian People's Republic, 633-34  
 Mongoloids, 445  
 Monitor (ship), 713  
 Monotype machine: Invention, 443  
 Monroe, James:  
   Biography, 384-85  
   Cabinet, 402  
   Elections, 371  
   Family, 397  
   Hall of Fame, 479  
 Monroe, La., 221  
 Monroe Doctrine, 428  
 Montage: Defined, 192  
 Montana:  
   General information, 224  
   *See also* States  
 Monte Carlo, Monaco, 633  
 Montevideo, Uruguay, 673  
 Montgomery, Ala., 214, 257  
   *See also* Cities (U. S.)  
 Months:  
   Jewish, 158-68  
   Sidereal & synodic, 510  
 Monticello, 232, 384  
 Montpelier, Vt., 232, 502  
 Montreal, Que., 502  
 Monuments, National, 328, 329  
 Moon, 509-10  
   Eclipses, 510-11  
   Phases (1957), 505-06  
   Rise & set (1957), 489-500  
   Symbol, 503  
 Mooney, Tom, 713  
 Moose Jaw, Sask., 502  
 Morehead Planetarium, 511  
 Mormons, 232, 451, 713  
 Morning stars (1957), 504-05  
 Morocco:  
   General information, 634-35, 651  
   *See also* Countries  
 Morrison Planetarium, 511  
 Mortality:  
   Selected countries, 275  
   U. S., 272  
 Moscow, U.S.S.R.:  
   Conferences, 208  
   Kremlin, 699  
   Library, 696  
   *See also* Cities (world)  
 Moses: Leads Jews from Egypt, 713  
 Moslems. *See* Mohammedanism  
 Mosques: Famous, 700  
 "Mother of Presidents," 232  
 Mother's Day, 464  
 Motion pictures:  
   Academy Awards, 475-77  
   Invention, 443  
   N. Y. Critics' awards, 477-78  
   Sound pictures: first, 443  
   Theaters: number, 729  
   Top-grossing films, 717  
 Motor, A-C: Invention, 443  
 Motor vehicles:  
   Death rates: by states, 276  
   Death rates: by year, 274  
   Deaths: by state, 276  
   Deaths: by year & type, 276



Domestic traffic, 730  
 Exports, 738  
 Imports, 738  
 Laws: arrests, 282, 283  
 Laws: by state, 321  
 Production: world, 743  
 Sales, 727  
*See also* Automobiles  
 Motorboating, 851-52, 873  
 Motorcycling, 868  
 Mottoes:  
   State mottoes, 214-38  
   National motto, 335  
 Mound State Monument, 334  
 Moundville, Ala., 334  
 Mt. *See* name of peak  
 Mt. Hamilton, Calif., 511  
 Mt. McKinley National Park, 328  
 Mt. Rainier National Park, 328  
 Mt. Vernon, N. Y., 257  
 Mt. Vernon (Va.), 232  
 Mt. Wilson Observatory, 511  
 Mountain states:  
   Economy: statistics, 733  
   Population: marital status, 262  
 Mountains:  
   Heights: U. S., 306  
   Heights: World, 684  
   Highest mountain east of Rockies, 227  
   *See also* Volcanoes  
 Mozambique, 651, 652  
 Mukden, Manchuria, 568  
 Mules: On farms, 732  
 Mumps, 446  
 Muncie, Ind., 258  
 Munich, Germany, 598  
   Beer-hall putsch, 203  
   Parley (1938), 206  
   *See also* Cities (world)  
 Murders: Number & arrests, 282  
 Murray, Utah, 232  
 Muscle Shoals, 214  
 Muses (myth.), 177  
 Museums:  
   United States, 330-35  
   World, 697  
 Music:  
   Bands & orchestras: number, 729  
   Pulitzer Prizes, 475  
 Muskogee, Okla., 228  
 Mussolini, Benito, 203, 207, 208, 618  
 Mutual Broadcasting System, 318  
 Mutual Security Appropriation Bill, 349, 350  
 Mystic, Conn., 334  
 Mythology:  
   Egyptian, 181  
   Greek & Roman, 173-79  
   Norse, 179-81

— N —

NATO. *See* North Atlantic Treaty Organization  
 NRA, 204  
 Nagasaki, Japan, 208  
 Name origins of states, 214-38  
 Names: Family, 52-62  
 Nampa, Idaho, 218  
 Nanking, China, 568  
 Nantes, Edict of, 712  
 Naples, Italy, 618  
   Library, 696  
   *See also* Cities (world)  
 Napoleon: Exiles, 713  
 Napoleonic Code, 711  
 Napoleonic Wars, 713

Narcotic Laws:  
   Arrests, 282  
   Prisoners, Federal, 283  
 Nashua, N. H., 225  
 Nashville, Tenn., 231, 258  
   *See also* Cities (U. S.)  
 Nassau, Bahamas, 542  
 Nasser, Gamal Abdel, 581, 582  
 Natal, 540  
 National Academy of Design, 331  
 National Air Museum, 332  
 National Anthem, 430  
 National Battlefield Parks, 328, 329  
 National Battlefield Sites, 328, 329  
 National Broadcasting Co., 318  
 National Capital Parks, 328, 330  
 National Cemeteries, 328, 330  
 National Collection of Fine Arts, 332  
 National Committees, 352  
 National Conventions, 369, 370  
 National defense. *See* Defense  
 National Democratic party, 372  
 National Gallery of Art, 332, 697  
 National Geographic Society, 717  
 National Historic Sites, 328, 330  
 National Historical Parks, 328, 329  
 National Housing Act, 345  
 National income, 718  
 National Industrial Recovery Act, 345  
 National Labor Relations Act, 345  
 National Labor Relations Board, 401  
 National League. *See* Baseball; Football  
 National Memorial Parks, 328, 329  
 National Memorials, 328, 330  
 National Military Parks, 328, 329  
 National Monuments, 328, 329  
 National Park System, 328-30  
 National Parkways, 328, 330  
 National Republican party, 371  
 National Seashore Recreational Area, 328, 330  
 National Security Act of 1947, 347  
 National Security Council, 398  
 National Socialists (Nazis), 598  
 National Zoological Park, 698  
 Nations. *See* Countries  
 Natural gas. *See* Gas  
 Natural history: Museums, 330-35  
 Natural resources: World, 740-44  
 Naturalization, 253  
 Nauru, 560  
   Area & population, 526  
 Nautical mile: Defined, 438  
 Nautilus (submarine), 210  
 Navajo museum, 334  
 Naval Academy, U. S., 355-56  
   Government funds, 286  
 Navies: Leading countries, 744  
 Navy (U. S.):  
   Allowances, 362  
   Casualties, 362  
   Court-martial: cases, 283  
   First Admiral, 715  
   History, 357  
   Insignia, 359  
   Legislation, 347-51  
   Naval Academy, 356  
   Officers, 358-59  
   Pay, 350, 359-62  
   Personnel: by year, 363  
   Ranks, 359-60

Secretary of, 398  
 Strength, 362  
 Navy, U. S. Dept. of:  
   Expenditure, 734  
   Secretaries, 402-05  
 Nazis, 204-08, 598  
 Neap Tides, 510  
 Near East: Maps, 139, 144  
 Nebraska:  
   General information, 225  
   *See also* States  
 Needles, Calif., 502  
 Negeb, 616, 617  
 Negroes:  
   Births, 269  
   Dred Scott case, 712  
   Education, 288  
   Population, 251, 252  
   School segregation, 19-20  
   Voting rights, 426  
   *See also* Nonwhite races; Slavery  
 Negroids, 445  
 Neil Award, 804  
 Nelson, Brit. Columbia, 502  
 Nelson Gallery, 334  
 Nepal, 635-36  
 Nephritis: Death rates, 274  
 Neptune (planet), 509  
   Symbol, 503  
 Netherlands:  
   General information, 636-39  
   *See also* Countries  
 Netherlands Indies. *See* Indonesia  
 Networks: Radio & TV, 318  
 Neutrality Acts, 343, 345, 346  
 Neutron: Discovery, 444  
 Nevada:  
   General information, 225  
   *See also* States  
 Nevis, 548  
 New Bedford, Mass., 258  
 New Britain, Conn., 258  
 New Britain (Isl.), 689  
 New Brunswick, 545  
 New Caledonia, 596-97  
   Area & population, 589  
 New Castle, Del., 216  
 New Deal, 341  
 New Economic Policy (U.S.S.R.), 203  
 New England States:  
   Economy: statistics, 733  
   Hurricanes, 706  
   Population: marital status, 262  
 New Guinea, British. *See* Papua  
 New Guinea (Isl.):  
   Area, 685  
   Volcano, 690  
 New Guinea, Netherlands, 639  
 New Guinea, Territory of, 559  
   Area & population, 526  
 New Hampshire:  
   General information, 225-26  
   *See also* States  
 New Haven, Conn., 216  
 New Hebrides, 526, 597  
   Area & population, 589  
   Volcanoes, 689, 690  
 New Jersey:  
   General information, 226  
   *See also* States  
 New London, Conn., 356  
 New London, Tex., 700  
 New Mexico:  
   General information, 226  
   *See also* States  
 New Orleans, La., 221  
   General information, 243  
   Battle of, 715  
   *See also* Cities

- New Rochelle, N. Y., 258  
 New Year, Jewish, 462  
 New Year's Day, 461, 464  
 New York (state):  
   General information, 226-27  
   Historical Association, 334  
   See also States  
 New York, N. Y.:  
   General information, 243-44  
   Bridges, 702  
   Buildings: tallest, 701, 709  
   Congress of the Confederation, 227  
   Critics' awards, 477-78  
   Fire (1835), 706  
   Harbor, 309  
   Library, 697  
   Museums, 330-31  
   National Conventions, 370  
   Planetarium, 511  
   Snowfall, 511  
   Statue of Liberty, 415  
   Structures, 701  
   U. N. headquarters, 755  
   World's Fair, 206  
   Zoos, 698  
   See also Cities  
 New Zealand:  
   General information, 560-62  
   Geysers, 691  
   Volcanoes, 690  
   See also Countries  
 Newark, Del., 216  
 Newark, N. J., 226  
   General information, 244  
   See also Cities  
 Newfoundland, 544, 545, 685  
 Newport, R. I., 230  
 Newspapers:  
   Advertising, 729  
   Daily: U. S., 316-17  
   First, 715, 716  
   Number: by state, 315  
   Oldest newspaper: U. S., 216  
 Newsreel: First, 715  
 Newton, Mass., 258  
 Niacin: In food, 440  
 Niagara Falls, 686  
 Niagara Falls (town), N. Y., 258  
 Nioce, Council of, 712  
 Nicaragua:  
   General information, 639-40  
   U. S. intervention, 358  
   Volcanoes, 690  
   See also Countries  
 Nicholas II (Russia), 203  
 Nickel: Imports, 738  
 Nicknames:  
   Baseball clubs, 785  
   States, 214-38  
 Nicobar. See Andaman  
 Niger, 593  
   Area & population, 589  
 Nigeria, 537  
   Area & population, 526  
 Night schools, 287  
 Nile, 687  
 Nineteenth Amendment, 426  
 Nirvana: Defined, 450  
 Nisel: Defined, 193  
 Nixon, Richard M., 396  
 Nobel Prizes, 465-69  
   For 1956, 15  
 Nogales, Ariz., 502  
 Nome, Alaska, 502  
 Nominations: Presidential, 370  
 Nonwhite races (U. S.):  
   Births, 268, 269  
   Deaths, 272  
   Life expectancy, 278-80  
   Population, 252, 253  
   Voting rights, 426  
   See also Negroes  
 Norfolk, Va., 232  
   General information, 244  
   See also Cities  
 Norfolk Dam, 701  
 Norfolk Island, 560  
   Area & population, 526  
 Normandie (ship), 710  
 Norrs (myth.), 180  
 Norris Dam, 701  
 Norris-LaGuardia Act, 344  
 Norse mythology, 179-81  
 North America:  
   Area, 683  
   Dimensions, 683  
   Elevations, 681  
   Exploration, 681  
   Geodetic center, 220  
   Geographic center, 228  
   Map, 148  
   Population, 250, 683  
   Religions, 447  
 North Atlantic Treaty Organization:  
   Countries: map, 136-37  
   European army approved, 210  
   Germany admitted, 211  
   Member nations, 213  
   Ratification: U. S., 348  
   Treaty: signed, 209  
   Treaty: text, 410-11  
 North Borneo. See Borneo  
 North Canadian River, 308  
 North Carolina:  
   General information, 227  
   See also States  
 North Dakota:  
   General information, 227-28  
   See also States  
 North Las Vegas, Nev., 225  
 North Little Rock, Ark., 215  
 North Platte, Nebr., 225  
 North Platte River, 308  
 North Pole, 682  
   Flights over, 481, 482  
 North Sea, 685  
 Northern Ireland. See Ireland  
 Northern Lights, 508  
 Northern Rhodesia. See Rhodesia  
 Northwest Ordinance, 713  
 Northwest Territories (Can.), 545  
 Norway:  
   General information, 640-42  
   See also Countries  
 Notre-Dame (Paris), 700  
 Nova Scotia, 545  
 Novelists: Pulitzer Prizes, 472-73  
   See also Literature  
 Nubian Desert, 680  
 Nuremberg laws, 205  
 Nuremberg trials, 208  
 Nuts:  
   Imports, 738  
   Income: marketing, 731  
 Nyasaland, 537-38  
   Area & population, 526  
 Oak Park, Ill., 258  
 Oak Ridge, Tenn., 231, 332  
 Oakland, Calif., 215  
   General information, 244  
   See also Cities  
 Oath:  
   Constitutional, 423  
   Freeman's, 382  
   Presidential, 421  
 Oats:  
   Prices: farm, 731  
 Production: world, 742  
 Ob River, 687  
 Observatories (astron.), 511  
 Ocean Island, 562  
 Oceania:  
   Area, 683  
   British Commonwealth, 526, 557-62  
   Elevations, 683  
   Exploration, 682  
   French territories, 589, 596-97  
   Map, 142-43  
   Population, 250, 683  
   Religions, 447  
 Oceans: Dimensions, 685  
 Octagon: Area, 436  
 Odd Fellows (assn.), 717  
 Office of Defense Mobilization, 398  
 Officers: Armed Forces, 358-59  
 Ogden, Utah, 232, 258  
 Ohio:  
   General information, 228  
   See also States  
 Ohio River, 308, 688  
 Ohm's Law: Discovery, 444  
 Oil industry:  
   Arabia, 657  
   Exports, 738  
   First oil well, 715  
   Hours worked, 724  
   Imports, 738  
   Indonesia, 611  
   Iran, 612  
   Iraq, 614  
   Middle East: map, 144  
   Oklahoma, 228  
   Pipelines: traffic, 730  
   Production: U. S., 721, 722  
   Production: world, 741  
   Rumania, 655  
   Tidelands Oil Bill, 349, 350  
   Wages, 724  
 Okhotsk Sea, 685  
 Okinawa, 208  
 Oklahoma:  
   General information, 228-29  
   See also States  
 Oklahoma City, Okla., 228  
   General information, 244  
   See also Cities  
 Old-age insurance, 345, 747-51  
 Old Faithful (geyser), 692  
 Old Testament: Characters, 169-72  
 Olympia: Statue of Zeus, 682  
 Olympia, Wash., 233  
 Olympic Games, 795-800, 863  
   1960 games: location, 800  
 Olympic National Park, 328  
 Omaha, Nebr., 225  
   General information, 244-45  
   See also Cities  
 Oman and Masqat, 514-15  
 Ontario, Lake, 688  
   U. S.: water area, 309  
 Ontario (prov.), 545  
 "Open door" policy, 340  
 "Operation Big Switch," 210  
 Oppenheimer, J. Robert, 211  
 Ophthalmoscope, 443  
 Orange Bowl (football), 807  
 Orange Free State, 540  
 Orange River, 688  
 Oranges: Prices, 731  
 Oregon:  
   General information, 229  
   See also States  
 Organizations, 716-17  
   How to form, 208  
   Jewish, 461  
   Sports, 772

Oriental Institute, 331  
 Orinoco, 687  
 Orlando, Fla., 218, 258  
 Orthodox Churches, 447, 448-49, 713  
 Osaka, Japan, 621  
 Oscars. *See* Academy Awards  
 Oslo, Norway, 640  
 Ottawa, Ontario, 502, 545  
 Outer Mongolia. *See* Mongolia  
 Overseas Press Club Awards, 475  
 Owensboro, Ky., 220  
 Oxford Movement, 461  
 Ozone: Discovery, 444

## P

Pacific Ocean:  
 Dimensions, 685  
 Discovery, 681  
 First flight over, 482  
 U. S.: coastline, 309  
 U. S.: water area, 309  
 Pacific States:  
 Economy: statistics, 733  
 Population: marital status, 222  
 Paducah, Ky., 220  
 Pago Pago, Amer. Samoa, 236  
 Pagodas: Famous, 700-01  
 Painted Desert, 214, 680  
 Pakistan:  
 General information, 556-57  
*See also* Countries  
 Palestine, 616-18  
*See also* Israel; Jordan  
 Palm Sunday, 461, 463  
 Palomar Observatory, 511  
 Panamá:  
 General information, 642-43  
 U. S. intervention, 358  
*See also* Countries  
 Panama Canal, 236, 343, 643, 692  
 Map, 149  
 Panama Canal Zone. *See* Canal Zone  
 Panamá City, Panamá, 642  
 Pancake Tuesday, 461  
 Panmunjom, Korea, 625  
 Pantheon, 699  
 Papal States, 674  
 Paper currency: Portraits, 271  
 Paper industry:  
 Establishments, 726  
 Exports, 738  
 Hours worked, 724  
 Imports, 738  
 Prices, 727  
 Production, 721, 723  
 Wages, 724  
 Papua, 559-60, 639  
 Area & population, 526  
 Par values: Currency, 737  
 Parachutes: First jump, 480  
 Paraguay:  
 General information, 643-44  
*See also* Countries  
 Paraná, 687  
 Parapsychology: Defined, 193  
 Parcel post, 365  
 Paris, France:  
 Bibliothèque Nationale, 696  
 Notre-Dame, 700  
 University of Paris, 695  
*See also* Cities (world)  
 Parity: Defined, 193  
 Parity prices: Farm, 731  
 Parkersburg, W. Va., 233  
 Parks:  
 City-owned parks, 238-47  
 National Park System, 328-30

State parks, 214-38  
 Parkways, National, 328, 330  
 Parliament (England), 713  
 Parliamentary procedure, 126-33  
 Parochial schools, 289  
 Parsec: Defined, 438  
 Parthenon, 699  
 Pasadena, Calif., 258  
 Passaic, N. J., 258  
 Passengers. *See* Aviation; Railroads  
 Passover, 461, 463  
 Patagonia, 516  
 Patents: Procedure, 319  
 Paterson, N. J., 226, 258  
 Patients: Hospital, 278  
 Paul I (Greece), 602  
 Pavlov, Ivan, 444  
 Pawtucket, R. I., 230  
 Pay: Armed forces, 359-62  
*See also* Salaries; Wages  
 Payments: U. S.: balance of, 736  
 Peace: Nobel Prizes, 465-66  
 Peaks. *See* Mountains  
 Peanuts: Prices, 731  
 Pearl Harbor, 207  
 Pedestrians: Deaths, 276  
 Peiping, China, 568, 704  
 Peking, China. *See* Peiping  
 Peloponnesian War, 713  
 Pemba, 541  
 Area & population, 526  
 Pendulum clock: Invention, 443  
 Penicillin: Discovery, 444  
 Pennsylvania:  
 General information, 229  
 Johnstown flood, 705  
*See also* States  
 Pennsylvania Academy of Fine Arts, 332  
 Pensions: Veterans, 349  
 Pentagon (math.): Area, 436  
 Pentecost, 462, 463  
 Pentecost, Hebrew, 462  
 Pentathlon, 880  
 People's party, 372  
 Peoria, Ill., 219  
 Periodic table: Discovery, 444  
 Peron, Juan D., 515  
 Ousted, 211  
 Perpetual calendar, 504  
 Persia. *See* Iran  
 Persian empire, 693  
 Persian Wars, 713  
 Peru:  
 General information, 644-45  
 Volcanoes, 690  
*See also* Countries  
 Pescadores, 571  
 Petition: Right of, 424  
 Petrified Forest, 214  
 Petroleum. *See* Oil  
 Petsamo,  
 Pharos: Alexandria, 682  
 Philadelphia, Pa., 229  
 General information, 245  
 Continental Congress, 429  
 Independence Hall, 701  
 Liberty Bell, 354  
 Museums, 332  
 Planetarium, 511  
*See also* Cities  
 Philippines, Republic of:  
 General information, 645-47  
 Aid bill: U. S., 348  
 Earthquakes, 705  
 Independence: legislation, 345  
 Typhoons, 706  
 Volcanoes, 689  
*See also* Countries  
 Phoenix, Ariz., 214, 253  
*See also* Cities

Phoenix Islands, 562  
 Phonograph:  
 Invention, 443  
 Statistics: U. S., 320  
 Photography:  
 Aerial: first, 480  
 Inventions, 443  
 Pulitzer Prizes, 471  
 Studios: number, 729  
 Photosphere, 506  
 Physics:  
 Discoveries, 443-44  
 Formulas, 436  
 Nobel Prizes, 466-69  
 Thermometer scales, 437  
 Pi (math.): Defined, 438  
 Pica: Defined, 438  
 Pierce, Franklin:  
 Biography, 388  
 Cabinet, 403  
 Election, 372  
 Family, 397  
 Pierre, S. Dak., 230, 502  
 Pig iron. *See* Iron  
 Pikes Peak, 306, 684  
 Pilgrims: American, 429, 713  
 Pilots: Airplane, 484  
 Pine Bluff, Ark., 215  
 Pines, Isle of, 597  
 Pinetree Line, 148  
 Pipe (meas.): Defined, 438  
 Pisa: Leaning tower, 699  
 Pistol shooting, 873  
 Pitcairn Island, 560  
 Pittsburgh, Pa., 229  
 General information, 245  
 Carnegie Institute, 333  
 Observatory, 511  
 Planetarium, 511  
*See also* Cities  
 "Pittsburgh of the South," 214  
 "Pittsburgh of the West," 216  
 Pittsfield, Mass., 258  
 Pius XII, 675  
 Pizza: Defined, 193  
 Plague:  
 Black Death, 711  
 London, 713  
 Planetaria, 511  
 Planets, 509  
 As morning & evening stars, 504-05  
 Plant & equipment expenditures, 723  
 Plants: Classification, 444  
 Plassey, Battle of, 714  
 Plato, 680  
 Platt National Park, 328  
 Platte River, 308  
 Pledge to Flag, 433  
 Plumbing: Establishments, 726  
 Plurality: Defined, 382  
 Pluto (planet), 509  
 Symbol, 503  
 Plymouth, Mass., 429  
 Plymouth Rock, 222, 713  
 Pneumatic tire: Invention, 444  
 Pneumonia, 446  
 Death rates, 274  
 Incubation & communicability, 446  
 Po River, 620  
 Pocatello, Idaho, 218  
 Pocket billiards, 826  
 Pocket veto: Defined, 352  
 Poetry: Pulitzer Prizes, 474  
 Point (meas.): Defined, 438  
 Point 4 Program, 348  
 Point of Order, 132  
 Poisons: Death rates, 277  
 Poitiers, Battles of, 713, 714  
 Poland:  
 General information, 647-49  
 Partitioning of, 714



**Poland—(cont.)**

Revolt as satellite, 17-19

*See also* Countries

Polar auroras, 508

Polar flights, 481, 482

Policemen: Number, 725

**Pollo:**Incubation & communica-  
bility, 446

Salk vaccine, 444

Political changes since 1945,  
211-12**Polk, James K.:**

Biography, 387

Cabinet, 403

Election, 372

Family, 397

Minority President, 479

Poll tax, 382

**Polo, 833-35**

1956 champions, 880

Measurements, 823

**Pompeii:** Destruction, 689

Ponce, Puerto Rico, 235

Pontiac, Mich., 258

Pontiffs. *See* Popes

Pony Express, 714

Pool parlors: Number, 729

Popes, 458-59

Pius XII, 674, 675

Popocatepetl, 684, 690

**Population:**

U. S. (1610-1956), 250

U. S.: by age, 252, 253

U. S.: by race, 251, 252, 253

U. S.: by sex, 252, 253

U. S.: cities (1920-50), 256-  
59

U. S.: density by state, 255

U. S.: density by year, 250

U. S.: farm, 252, 731

U. S.: foreign-born, 254

U. S.: marital status, 262

U. S.: Negro &amp; white, 251

U. S.: per cent ever mar-  
ried, 266U. S.: projections (1960-  
75), 250U. S.: states (1790-1955),  
255

U. S.: urban &amp; rural, 251

U. S.: with territories, 259

U. S.: working, 260

World, 250, 683

World: cities, 704

World: countries, 703

World: high densities, 683

**Populists. *See* People's party**

Port Arthur, Ont., 502

Port Arthur, Tex., 258

Port Chicago, Calif., 706

Portal-to-portal: Defined, 193

Portland, Maine, 221, 258

*See also* Cities (U. S.)

Portland, Oreg., 229

General information, 245

*See also* Cities

Portraits: Paper currency, 271

Portsmouth, N. H., 225, 714

Portsmouth, Va., 232, 258

**Portugal:**

General information, 649-53

Overseas territories, 651-53

*See also* Countries**Portuguese East Africa. *See***

Mozambique

**Portuguese Guinea. *See* Guinea****Portuguese India. *See* India****Portuguese West Africa. *See***

Angola

**Positron:** Discovery, 444**Post Office Dept., U. S., 398**

Employees pay raise, 351

Postmasters General, 402-05

**Postal communications:**

Regulations, 365-68

UPU, 757

**Potatoes:**

Consumption, 719

Prices, 731

Production: U. S., 732

Production: world, 742

Potsdam Conference, 409-10

Poughkeepsie Regatta,

**Poultry:**

Consumption, 719

Income: marketing, 731

Prices, 731

Pound (weight): Defined, 435

Power omission, Federal, 400

Power loom: Invention, 443

Prague, Czechoslovakia, 575

Museum, 698

Preakness Stakes, 842

Precipitation, 312-14

Presbyterian Churches, 449-50

**Presidents:**

Colleges, 291-305

Confederacy, 405

Continental Congresses, 430

France, 183

**Presidents (U. S.):**

Biographies, 383-95

Cabinets, 402-05

Election (1956), 20-21

Elections (1789-1952), 371-  
81Elections: procedure, 369,  
425

Executive Office of, 398

Families, 397

First woman candidate, 716

Inauguration date, 369

List of, 396

Minority Presidents, 428

"Mother of Presidents," 232

Nominations, 370

Numbering of, 395

Oath, 421

Powers, 350, 420-22

Qualifications, 421

Religions, 396

Salary, 348, 397

Succession, 347, 370

Term: end of, 427

Terms: limit to, 427

Vacancy: filling, 421, 427

Veto power, 352, 419

Wives, 397

Presiding at meetings, 126-33

Press, Freedom of, 424, 712

Pressure group: Defined, 194

Pribilof Islands, 234

**Prices:**

Consumer, 719

Controls, 208, 210, 343, 349

Farm, 731

Foods, 731

Indexes, 719, 727

Parity: farm, 731

Wholesale, 727

**Prime Ministers:**

British, 182

Canadian, 544

Prince Edward Island, 545

Prince of Wales (battleship),  
207**Principe, 652****Printing:**

Hours worked, 724

Inventions, 443

Production, 721

Wages, 724

*See also* Publishing**Prism:** Volume, 436**Prisoners:** Federal, 283**Private schools. *See* Schools****Prizes. *See* Awards****Procedure, parliamentary, 126-33****Production. *See* Agriculture;****Industry; Manufacturing****Professional schools. *See*****Schools****Progressive party (1912), 373,****381****Progressive party (1924), 373,****381****Progressive party (1948), 370,****379****Progressive party (1952), 380****Prohibition:**

Established, 343, 426

Kansas repeals, 220

Repealed, 427

States having, 223, 229

Volstead Act, 343

**Prohibition party, 372-80****Prophets: Old Testament, 172****Prostitution: Arrests, 282****Protestant Churches, 447-51****Protestant Episcopal Church, 451**

Bishops, 452-53

**Proton: Discovery, 444****Providence, R. I., 229, 230****General information, 249***See also* Cities**Provo, Utah, 232****Prussia: Kings, 184****Psychoanalysis: Discovery, 444****Psychodrama: Defined, 194****Psychosomatic: Defined, 194****Public debt. *See* Debt****Public schools, 284-289****Public utilities:**

Construction, 720

Electrical output, 721

Employment, 724

Establishments, 722

Hours worked, 725

SEC, 345

Wages, 725

**Publishing:**

Advertising, 729

Hours worked, 724

Magazines: leading, 318

Newspapers: by state, 315

Newspapers: daily, 316-17

Production, 721

Wages, 724

**Pueblo, Colo., 216, 258****Puerto Rico:**

General information, 235-36

Constitution, 349

**Puget Sound, 309****Pulitzer Prizes, 470-75****Pullman strike, 714****Pump, air: Invention, 443****Punic Wars, 714****Pupils. *See* Schools****Pure Food and Drug Act, 343****Purim, 463****Pygmies, 445****Pyramids:**

Egypt, 682

Volume: formula for, 436

**Pyrenees, 590**

---

**Q**

---

**Qatar, 514-15****Quadruplets: Number born, 269****Quakers, 451****Quantum theory, 444****Quarrying, 725***See also* Stone industry**Quebec (prov.), 545****Quebec, Que., 502***See also* Cities (world)**Queen Mary (ship), 710**

## Queens (boro.):

Area & population, 258  
 Borough President, 244  
*See also* New York, N. Y.  
 Quincy, Mass., 258  
 Quintal: Defined, 438  
 Quintuplets: Dionne, 204  
 Quire: Defined, 438  
 Quisling: Origin of term, 640  
 Quiz show: First with panel, 715

## R

## R.C.A. Building, 709

Rabbinical organizations, 461

## Rabies, 446

Preventive, 444  
 Races (peoples), 445  
 Births: U. S., 267  
 Deaths: U. S., 273  
 Life expectancy, 278-80  
 Population: U. S., 252  
 Racine, Wis., 234, 258

## Racing:

Auto racing, 817, 853-54  
 Harness racing, 849-50  
 Horse racing, 836-46, 847  
 Tracks: number, 729

Racism: Defined, 194

Racquets (game), 811-12, 856

## Radar:

Defined, 194  
 Warning lines, 148

## Radio industry:

Advertising, 729  
 Exports, 738  
 First panel quiz show, 715  
 Inventions, 443  
 Networks, 318  
 Sales, 727  
 Sets: homes with, 230, 728  
 Stations: by city, 238-47  
 Stations: U. S., 318

Radioactivity: Discovery, 444

## Radios:

Number: by city, 238-47  
 Number: by continent, 320  
 Number: U. S., 320, 723

## Railroads:

Accidents: famous, 708-09  
 Cape-to-Cairo Railroad, 711  
 Carloadings, 721  
 Construction, 720  
 Countries: leading, 743  
 Deaths: accidental, 275  
 Domestic traffic, 730  
 First steam railroad, 716  
 Freight, 730, 743  
 Hours worked: limit, 343  
 Legislation, 343  
 Passengers, 730  
 R.F.C., 344  
 Social Security, 751  
 Transcontinental: first, 716

## Rain:

Precipitation: U. S. cities, 312-14  
 Records: world, 692-93  
 Rainier III, Prince, 633  
 Rainier, Mt., 306, 684  
 Raleigh, N. C., 227, 258  
*See also* Cities (U. S.)  
 Rangoon, Burma, 564  
 Ranks: Armed forces, 359-60  
 Rapallo, Treaty of, 203  
 Rape: Arrests, 282  
 Rapid City, S. Dak., 230  
 Rasputin: Murdered, 714  
 Rationing, 207  
 Ration: Invention, 443  
 Reading, Pa., 229

## Real estate: Establishments, 722

Ream (meas.): Defined, 438

Reaper: Invention, 443

Recipe section, 62-66

## Reciprocal Trade Agreements

Acts, 346, 349, 350, 351

Reconstruction Finance Corporation, 344

## Records:

Aviation, 483-84

Steamship, 710

*See also* Sports

Recreation. *See* Amusement

Rectangle: Area, 436

Red River, 308

Red Sea, 685

## Reformation:

Events, 714  
 Germany, 597  
 Universities, 695

## Refrigerators:

Exports, 738  
 In homes, 728  
 Production, 723

Refugee Immigration Act, 350

Registered mail, 366

Reichstag building: Burned, 204

Reign of Terror (France), 712

Relative humidity: U. S. cities, 312-14

Relativity: Theories, 444

Relief: Number on (1935), 205

## Religion:

Antipopes, 457  
 Archbishops of Canterbury, 460  
 Cardinals, 455-57  
 Churches: U. S., 447-51  
 England, 460  
 Freedom of, 424  
 Holidays, 461-64  
 Jewish organizations, 461  
 Memberships, 447-51  
 Methodist bishops, 453  
 Of U. S. Presidents, 396  
 Popes, 458-59  
 Protestant Episcopal bishops, 452-53  
 Roman Catholic hierarchy, 453-55

Remington, William, 211

## Renaissance, 714

Structures: famous, 700  
 Universities, 695

Reno, Nev., 225, 502

Rents: Price index, 719

Repair services, 729

Repeal of prohibition, 427

Representatives. *See* House

Republic: Oldest, smallest, 656

## Republican party:

Congress, 23-28  
 Elections: Presidential, 372-81  
 Formation, 338  
 National Committee, 352  
 National Conventions, 370  
 State voting longest for, 232

Repulse (battle cruiser), 207

Reservations: Indian, 260

## Residence:

For divorce, 264  
 For voting, 382

Resources: World, 740-44

Restaurants, 726, 727

## Retail trade:

Chain stores, 728  
 Employment, 724  
 Establishments, 722, 726  
 Hours worked, 725  
 Sales, 727, 728, 733

Sales: by state, 733

Sales: leading outlets, 728

Wages, 725

Réunion, 594-95

Area & population, 589

Volcano, 689

## Revenue:

Cities, 238-47

Government: U. S., 734

States, 214-30

Revere, Paul: Ride, 222

Reversing layer, 506

Revolutionary War, 362, 711

Revolver: Invention, 443

Rh factor: Defined, 194

Rhee, Syngman, 625

Rheumatic fever, 446

Rhine, 600

## Rhode Island:

General information, 229-30

*See also* States

Rhodes: Colossus, 682

Rhodesia, Northern, 537-38

Area & population, 526

Rhodesia, Southern, 537-38

Area & population, 526

Riboflavin: In foods, 440

## Rice:

Prices: farm, 731

Production: world, 742

Riches: World, 740-44

Richfield, Utah, 502

## Richmond (boro.):

Area & population, 258

Borough President, 244

*See also* New York, N. Y.

Richmond, Calif., 258

Richmond, Va., 232

General information, 249

*See also* Cities (U. S.)

## Rifles:

Automatic: invention, 443

Rifle shooting (sport), 873

Riga, Latvia, 627

Riga, Treaty of, 203

Right of petition, 424

Ringling Museum, 334-35

Rio de Janeiro, Brazil, 523, 704

Rio Grande, 309, 687

## Rivers:

Of Underworld, 178

U. S., 308-09

World, 687-88

Roads: Mileages, 322-23

Roanoke, Va., 232, 258

Robbery: Arrests, 282

Rochester, Minn., 223

Rochester, N. Y., 227

General information, 246

*See also* Cities

Rock Hill, S. C., 230

Rock Springs, Wyo., 234

Rockefeller Center, 701

Rockefeller Foundation, 717

Rocket engine flight: First, 482

Rockets, 67-80

Rockford, Ill., 219, 258

Rocky Mountain National Park, 328

Rolque, 878

Roehm, Ernst: Purge, 205

Roller skating, 870

## Roman Catholic Church:

Antipopes, 457  
 Archbishops, 453-54  
 Bishops, 454-55  
 College of Cardinals, 455-57  
 Counter Reformation, 712  
 England, 460  
 France, 589  
 Inquisition, 713  
 Italy, 619  
 Membership, 447, 448  
 Pius XII, 675

**Roman Catholic Church—(cont.)**

Popes, 458-59  
 Schism with Eastern Church, 713  
 Vatican City State, 674-75  
 Roman Empire, 693, 714  
 Christianity, 711  
 Roman mythology, 173-79  
 Roman numerals, 437  
 Romanesque architecture, 699  
 Rome, Italy, 618  
 Founded, 714  
 Libraries, 696  
 Structures, 699, 700  
 World War, 207  
*See also* Cities (world)

Roosevelt, Eleanor, 397

Roosevelt, Franklin D.:

Biography, 394  
 "Arsenal of Democracy," 206  
 Assassination attempt, 354  
 Bank holiday, 204  
 Cabinet, 405  
 Elections, 375-78  
 Embargoes gold, 204  
 Family, 397  
 First " Fireside Chat," 204  
 Good-neighbor policy, 341  
 Nominations, 370  
 "One third of the nation," 205  
 "Quarantine" of aggressors, 205  
 Supreme Court plan, 205  
 Vice Presidential candidate, 373

Roosevelt, Theodore:

Biography, 391-92  
 Assassination attempt, 354  
 Cabinet, 404  
 Election, 373  
 Family, 397  
 Hall of Fame, 479  
 Nomination, 370  
 Roosevelt Museum, 331  
 Roosevelt Dam, 701

Rose Bowl (football), 806

Rosenberg, Julius & Ethel, 210

Roses, Wars of the, 715

Rosetta Stone, 697

Rosh Hashana, 462, 463

Rosiorucian Museum, 335

Ross, Betsy, 431

Roswell, N. Mex., 226

Rotary International, 717

Rotterdam, Netherlands, 636

Rowing:

1956 champions, 867

College, 809-10

Royal Canadian Mounted Police,

545

Royal Gorge, 216

Ruanda-Urundi, 520-21

Rubber industry:

Hours worked, 724  
 Imports, 738  
 Manufactures: exports, 738  
 Price index, 727  
 Production: U. S., 721  
 Production: world, 742  
 Vulcanizing: invention, 443  
 Wages, 724

Ruhr, 609

Rulers:

England, 181-82

France, 183

Israel & Judah, 171-72

Prussia & Germany, 184

Russia, 184

Rumania:

General information, 653-55

*See also* Countries

Rural population, 251, 252

Rurutu, 596

Rushmore, Mt.: Carvings, 230

Russell Sage Foundation, 717

Russia. *See* Union of S.S.R.

Russian Orthodox Church, 448

Russian Revolution, 203

Russian roulette: Defined, 194

Russo-Japanese War, 622, 714

Russo-Turkish War, 714

Ruth, Babe, 783

Rutland, Vt., 232

Ryder Cup, 791

Rye: Farm prices, 731

Ryukyu Islands, 238

Volcanoes, 689

## S

SEATO. *See* Southeast Asia

Treaty Organization

Saar, 601-02

Plebiscite, 205

Sacramento, Calif., 215, 258

*See also* Cities (U. S.)

Sacco & Vanzetti, 204

Saginaw, Mich., 223, 258

Sahara Desert, 680, 681

St. Albans, Vt., 232

St. Augustine, Fla., 218

St. Bartholomew massacre, 714

St. Clair, Lake, 309

St. Cloud, Minn., 223

St. Helena, 538-39

Area & population, 526

St. John, New Brunswick, 502

St. Joseph, Mo., 224, 258

St. Lawrence River, 687

St. Lawrence Seaway, 151, 350

St. Louis, Mo., 224

General information, 246

*See also* Cities (U. S.)

St. Mihiel, Battle of, 715

St. Patrick's Day, 461

St. Paul, Minn., 223

General information, 246

*See also* Cities (U. S.)

St. Peter's (Vatican), 700

St. Petersburg, Fla., 218, 258

St. Pierre and Miquelon, 595-96

Area & population, 589

St. Valentine's Day, 461

St. Valentine's Day massacre, 714

Saipan, 238

Sakhalin, 685

Salaries:

City governments, 249

Federal government, 348,

397

State governments, 248

Teachers, 284, 288

Salem, Mass., 715

Salem, Oreg., 229

Sales:

Chain stores, 728

Retail, 727, 728, 733

Sales tax: Autos, 321

Salina, Kans., 220

Salisbury, Md., 222

Salk vaccine, 444

Salmon, Idaho, 502

Salmon River, 309

Salmonella, 446

Salt Lake City, Utah, 231, 258

*See also* Cities (U. S.)

Salvador. *See* El Salvador

Salvation Army, 451

Samoa, American, 236

Samoa, Western, 526, 562

San Angelo, Tex., 258

San Antonio, Texas: 231

General information, 246

*See also* Cities (U. S.)

San Bernardino, Calif., 258

San Diego, Calif., 215

General information, 246

*See also* Cities (U. S.)

San Domingo. *See* Dominican Republic

San Francisco, Calif., 215

General information, 246-47

Bridges, 702

Earthquake, 705

Planetarium, 511

U. N. parley, 208

*See also* Cities (U. S.)

San Jacinto, Battle of, 714

San Jose, Calif., 258

San Juan, Puerto Rico, 235

San Juan Hill, Charge of, 714

San Marino (republic), 656

San Pedro, Calif., 215

Sandwich Islands, 235

Sanitation: Employees, 725

Santa Anita Derby, 842

Santa Anita Handicap, 842

Santa Claus: Name origin, 463

Santa Cruz Islands:

Volcano, 689, 690

Santa Fe, N. Mex., 226, 502

Santa Monica, Calif., 258

Santiago (Chile), 566

São Paulo, Brazil, 523, 704

São Tomé, 652

Area & population, 651

Sarasota, Fla., 334

Saratoga, Battle of, 711

Sarawak, 550

Area & population, 526

Sardinia, 620

Saskatchewan, 545

Satellite Countries, 17-19

Saturn (planet), 509

Symbol, 503

Saudi Arabia:

General information, 656

*See also* Countries

Sault Ste. Marie, Mich., 502

Sault Ste. Marie Canals, 692

Savannah, Ga., 218, 258

Savings bank: First, 716

Savonarola, 714

Saxons, 525

Scales: Thermometer, 437

Scarlet fever, 446

Death rate, 274

Scharnhorst (battleship), 207

Schenectady, N. Y., 258

Schick test: Discovery, 444

Schleier Gallery,

Schools:

Attendance laws, 285

Employment, 725

Federal aid, 286

Negroes, 288

Private schools, 286

Public schools, 284-89

Vocational schools, 287

*See also* Colleges; Educa-

tion

Schuman Plan, 210

Science:

Calories, 440

Chemical elements, 441-42

Discoveries, 444

Inventions, 443-44

Measures, 434-39

Museums: U. S., 330-35

Museums: world, 697-98

Races of mankind, 445

UNESCO, 757

Vitamins, 440

Weights, 435-39

Science fiction: Defined, 195

Scopes Evolution Trial, 714

Score (meas.): Defined, 438

Scotland:

Area & population, 527

Life expectancy, 281



- Universities, 695
- See also* Great Britain
- Scott, Dred, 712
- Scranton, Pa., 229, 258
- Scratch test: Defined, 195
- Screw propeller: Invention, 443
- Sea mile: Defined, 438
- Seal of U. S., 335
- Seas: Dimensions, 685
- Seashore Recreational Area, National, 328, 330
- Seasons: Change, 508-09
- Seattle, Wash., 233
- General information, 247
- See also* Cities (U. S.)
- Secession: Dates, 352
- Second International, 713
- Secondary schools. *See* Schools
- Secondhand stores: Number, 726
- Secretaries-General: U. N., 754
- Secretin: Isolation, 444
- Securities and Exchange Commission, 345, 401
- Security Council. *See* United Nations
- Segregation, 19-20
- Selective Service:
  - Act: legislation, 346, 347, 348, 349, 351
  - Act: violators, 283
  - Classifications, 357-58
  - Registration: first, 206
  - SSS, 401
- Senate (U. S.):
  - Committees, 24
  - Composition, 418
  - Crime investigation, 210
  - Election to, 426
  - First president pro tempore, 716
  - First woman elected to, 716
  - Impeachments, 418
  - Members: list of, 23-24
  - Qualifications, 418
  - Salaries, 350, 397
  - Terms, 418
  - Terms: end of, 427
  - Treaty of Versailles, 203
  - Vice President elected by, 425
- Senegal, 593
- Area & population, 589
- Seoul, Korea, 704
- September Massacres, 712
- Sequoia National Park, 328
- Serbia, 364
- Serfdom: Russia, 669
- Seven Falls, 686
- Seven Weeks' War, 597
- Seven Wonders, 682
- Seven Years' War, 714
- Seventeenth Amendment, 426
- Seventh Day Adventists, 451
- Seward, William H., 354
- Seward, Alaska, 234
- "Seward's Folly," 234
- Sewers: Construction, 720
- Sewing machine: Invention, 443
- Sex offenses: Arrests, 282
- Seychelles, 539
- Area & population, 526
- Seymour Planetarium, 511
- Shabuo, 462, 463
- Shanghai, China, 568, 704
- Japanese invasion, 204
- See also* Cities (world)
- Shannon River, 615
- Shasta, Mt., 684
- Shays' Rebellion, 714
- Sheep:
  - On farms, 732
  - Production: world, 742
- Sheffield, Eng., 525
- Shemini Atzereth, 463
- Shenandoah (dirigible), 708
- Shenandoah National Park, 328
- Sheridan, Wyo., 234
- Sherman's March, 711
- Shetland Islands, 681
- Shintoists: Number, 447
- Ships, 710
- U. S. Navy, 362
- Wrecks: famous, 707
- Shock therapy: Defined, 195
- Shoes:
  - Repair shops: number, 729
  - Sales, 727
  - Shine parlors: number, 729
  - Stores: leading, 728
- Shooting:
  - Galleries: number, 729
  - Rifle & pistol, 873
- Shooting stars, 510
- Shoreline: By state, 309
- Shreveport, La., 221, 258
- Shrove Tuesday, 461, 463
- Si Kiang, 687
- Siam. *See* Thailand
- Sicily:
  - Earthquakes (1908), 705
  - Volcano, 689
- Sidereal time, 487
- Sierra Leone, 539
- Area & population, 526
- Discovered, 681
- Silver: Production, 741
- Silver City, N. Mex., 502
- Simhath Torah, 463
- Singapore:
  - General information, 552
  - World War, 207
  - See also* Cities (world)
- Singer Building, 709
- Single persons: Per cent of population, 262
- Sinkiang, 571
- Sioux City, Iowa, 220, 258
- Sioux Falls, S. Dak., 230, 258
- Sistine Chapel, 700
- Sit-down strikes, 205
- Sitka, Alaska, 502
- Sixteenth Amendment, 426
- Skagarrak, 579
- Skating:
  - Ice skating, 819, 820, 863, 864
  - Rinks: number, 729
  - Roller skating, 870
- Skeet shooting, 873
- Skiing, 865
- Highest artificial jump, 223
- Skyscraper: First, 716
- Slavery:
  - American Colonies, 714
  - British Empire, 714
  - Compromise of 1850, 711-12
  - Dred Scott case, 712
  - Emancipation Proclamation, 711
  - First state to forbid, 232
  - Kansas-Nebraska Act, 713
  - Missouri Compromise, 713
  - Northwest Ordinance, 713
  - Prohibited, 425
  - Sloan Foundation, Inc., 717
  - Small Business Administration, 401
  - Small pox, 446
  - Smith, Alfred E., 370, 374
  - Smith Act, 346
  - Smithsonian Institution, 332
  - Snake River, 309
  - Snollygoster: Defined, 195
- Snow:
  - Records: U. S., 693
- Snowfall: U. S. cities, 312-14
- Snyder-Gray case, 714
- Soap opera: Defined, 195
- Soccer, 821, 860
- Social Security:
  - Legislation, 345, 348, 350, 351
  - Program, 747-51
- Socialist Labor party, 374-80
- Socialist party, 373-80
- Socialized medicine: Defined, 195
- Societies, 716-17
- Sports, 772
- Society Islands, 596
- Socrates, 680
- Soda: Solvay process, 444
- Sofia, Bulgaria, 562
- Softball, 791, 878
- Soil Conservation Act, 346
- Solar system: Heliocentricity, 444
- Solar time, 487
- Solomon Islands, 562
- Area & population, 526
- Solstices, 508-09
- Solvay process, 444
- Somalia, 621
- Somaliland, British, 539
- Area & population, 526
- Somaliland, French, 593
- Area & population, 589
- Somaliland, Italian. *See* Somalia
- Somerville, Mass., 258
- Somme, Battles of, 715
- Sonar: Defined, 195
- Songs: State, 214-38
- "Sooners": Defined, 228
- Sorbonne, 695
- Sorghum grain: Prices, 731
- Sorority: First, 716
- Sound:
  - First flight faster than, 482
  - Speed, 436
- Sound picture: First, 443
- South Africa, Union of:
  - General information, 539-41
  - See also* Countries
- South America:
  - Area, 683
  - Dimensions, 683
  - Elevations, 683
  - Exploration, 682
  - Map, 146
  - Population, 683
  - Religions, 447
- South Atlantic States:
  - Economy: statistics, 733
  - Population: marital status, 262
- South Bend, Ind., 219, 259
- South Carolina:
  - General information, 230
  - See also* States
- South China Sea, 685
- South Dakota:
  - General information, 230-31
  - See also* States
- South Gate, Calif., 259
- South Platte River, 309
- South Pole, 682
- First flight over, 482
- South Portland, Maine, 221
- South-West Africa, 541
- Area & population, 526
- Southampton (Isl.), 685
- Southeast Asia Treaty Organization, 213
- Southern Lights, 508
- Southwest Museum, 335
- Soybeans:
  - Exports, 738
  - Prices, 731

- Spain:**  
 General information, 657-59  
 Aid bill: U. S., 348  
 Civil war, 205  
 Franco: recognized by U. S., 206  
 Inquisition, 713  
*See also* Countries  
 Span (meas.): Defined, 438  
 Spanish-American War:  
 Casualties, 362  
 Events, 714  
 Spanish Armada, 714  
 Spanish Guinea. *See* Guinea  
 Spanish Morocco. *See* Morocco  
 Sparks, Nev., 225  
 Spartanburg, S. C., 230  
 Speakers of House:  
 List, 407  
 Salary, 348, 350, 397  
 Special delivery mail, 366  
 Spectrum analysis, 444  
 Speech: Freedom of, 424  
 Speed:  
 Falling body, 436  
 Light, 510  
 Light: discovery, 444  
 Records: aviation, 483, 484  
 Records: steamships, 710  
 Sound, 436  
 Speed limits: by state, 321  
 Speed skating, 820  
 Spending. *See* Expenditure  
 Sphere: Volume, 436  
 Sphinx, 699  
 Riddle of, 178  
 Spinning: Inventions, 443  
 Spirit of St. Louis (plane), 481  
 Spiritualists, 451  
 Spitsbergen, 642  
 Spokane, Wash., 233, 259  
*See* Cities (U. S.)  
 Sports, 772-880  
 1956 champions & records, 855-80  
 Measurements, 823  
 Olympic Games, 795-800  
 Organizations, 772  
 Sullivan Awards, 800  
*See also* individual sports  
 Spring (1957), 509  
 Springfield, Ill., 219, 259  
 Springfield, Mass., 222, 259  
 Springfield, Mo., 224  
 Springfield, Ohio, 259  
 Squalus (submarine), 707  
 Square: Area, 436  
 "Square Deal," 340  
 Squares and square roots, 439  
 Squash racquets, 811, 856, 866  
 Squash tennis, 812, 856  
 Stadiums: Baseball, 785  
 Stalin, Joseph, 669-70  
 Stalingrad, U.S.S.R., 207  
 Stamford, Conn., 216, 259  
 Stamp Act, 714  
 Stamps: First issued, 715  
 Standard time, 487  
 Stanley Cup, 813, 855  
 "Star-Spangled Banner," 430  
 Stars:  
 Brightest, 507  
 Morning & evening (1957), 504-05  
 "Twinkling": cause, 511  
 State, U. S. Dept. of, 398  
 Education: Funds, 286  
 Secretaries, 402-05  
 States (U. S.),  
 Agriculture, 732  
 Admission: procedure, 423  
 Altitudes: highest, lowest, 307  
 Area, 255  
 Births & birth rates, 267  
 Coastlines, 309  
 Congress: members, 23-27  
 Death rates: accidental, 277  
 Deaths, 273  
 Deaths: motor-vehicle, 276  
 Divorce information, 264-65  
 Economy, 733  
 Education, 284  
 Elections: Presidential, 22, 374-81  
 Employment: payroll, 725  
 Execution methods, 283  
 Families, 271  
 Governments, 248  
 Governors: elected 1956, 22  
 Hospital facilities, 278  
 Infant deaths, 273  
 Maps, 150-151  
 Marital status of population, 262  
 Marriage information, 263  
 Motor-vehicle deaths, 276  
 Motor-vehicle laws, 321  
 Negroes & whites, 251  
 New: procedure, 422  
 Newspapers: daily, 315  
 Only one split, 223  
 Only one that may subdivide, 231  
 Population: densities, 255  
 Population (1790-1955), 255  
 Thirteen original, 416  
 Unemployment compensation maximums, 751  
 Voting qualifications, 382  
 States (Confederate), 352  
 States' Rights Democratic party, 370, 379  
 Stations: Radio & TV, 318  
 Statue of Liberty, 415  
 Steam engine: Invention, 443  
 Steamboat: Invention, 443  
 Steamships: Records, 710  
 Steel industry:  
 Exports, 738  
 Hours worked, 724  
 Imports, 738  
 Production: U. S., 722  
 Production: world, 743  
 Truman seizure, 210  
 Wages, 724  
 Stern: Defined, 434  
 Stevenson, Adlai E.:  
 Candidate for President, 20-21  
 Nominations, 370  
 Stimson Doctrine, 204  
 Stock market:  
 Crash (1929), 204  
 Federal Securities Act, 344  
 SEC, 345  
 Stockholm, Sweden, 691  
 Library, 696  
 Museum, 698  
 Zoo, 699  
 Stockholm (ship), 13  
 Stockton, Calif., 259  
 Stone (meas.): Defined, 438  
 Stone industry:  
 Hours worked, 724  
 Production, 721  
 Wages, 724  
 Stores: *See* Retail  
 Stoves, 723  
 Stratosphere:  
 First flight, 482  
 Strawhat circuit: Defined, 196  
 Streptomycin, 196  
 Strikes (labor):  
 Causes, 725  
 First in U. S., 716  
 Number, 725  
 Sit-down strikes, 205, 206  
 Stromboli, 689  
 Structures: famous, 699-701  
 Students. *See* Colleges; Schools  
 Submarines:  
 Atomic, 210  
 First use in warfare, 230  
 U. S., 362  
 Suburban Handicap, 843  
 Subway: First, 716  
 Succession: Presidential, 347, 370  
 Sudan:  
 General information, 659-60  
 Sudan, French,  
 Area & population, 589  
 Suez Canal, 583, 692  
 Crisis, 15-16  
 Sugar Bowl (football), 807  
 Sugar industry:  
 Consumption, 719  
 Imports, 738  
 Production: world, 742  
 Sukkoth, 462, 463  
 Sulfur drugs, 196  
 Discovery, 444  
 Sullivan Award, 800  
 Sumatra, 609  
 Area, 685  
 Volcanoes, 690  
 Summer (1957), 509  
 Sun, 506  
 Eclipses (1957), 510-11  
 Rise & set (1957), 489-500  
 Sun-spots, 506  
 Symbol, 503  
 Zodiac, 503  
 Sunshine: U. S.: cities, 312 14  
 Superhighway: Defined, 196  
 Superior, Lake, 688  
 U. S.: water area, 309  
 Supersonic: Defined, 196  
 Supersonic flight: first, 482  
 Supremacy, Act of, 460  
 Supreme Court (U. S.):  
 Desegregation, 19-20  
 "Dred Scott case," 712  
 First law found unconstitutional, 715  
 Judiciary Act, 346  
 Justices: list, 406  
 Powers, 422  
 Roosevelt plan, 205  
 Salaries, 350, 397  
 Segregation: banned in schools, 19-20  
 Sit-down strikes, 205  
 Social Security Act, 205  
 Truman's steel industry seizure, 210  
 Wagner-Connery Act, 205  
 Supreme Courts: States, 248  
 Surgery: First antiseptic, 444  
 Suribachi, Mt., 208, 689  
 Surinam, 638-39  
 Surnames: American, 52-62  
 Surrenders. *See* World War II chronology  
 Surveying: Measures, 438  
 Survivors' insurance, 748-49  
 Suspicion: Arrests for, 282  
 Susquehanna River, 309  
 Sutter's Mill, 712  
 Swaziland, 534  
 Area & population, 526  
 Sweden:  
 General information, 660-62  
*See also* Countries  
 Sweet potatoes:  
 Consumption, 719  
 Prices, 731  
 Swimming, 831-32  
 1956 champions, 861, 880  
 Olympic Games, 798-800  
 Pools: number, 729

Swine: On farms, 732  
 Switzerland:  
   General information, 662-63  
   *See also* Countries  
 Sydney, Australia, 557  
 Synodic month, 510  
 Syphilis:  
   Death rates, 274  
   Incubation & communicability, 446  
   Wassermann test, 444  
 Syracuse, N. Y., 227  
   General information, 247  
   *See also* Cities (U. S.)  
 Syria:  
   General information, 663-64  
   *See also* Countries

— T —

TVA. *See* Tennessee Valley Authority  
 Table tennis, 830, 866  
 Tabloid newspaper: First, 716  
 Tacoma, Wash., 233, 259  
 Taft, William Howard:  
   Biography, 392  
   Cabinet, 404  
   Election, 373  
   Family, 397  
   Nomination, 370  
   Supreme Court, 406  
 Taft-Hartley Act, 347, 349  
 Tahiti, 596  
 Taiwan. *See* Formosa  
 Taj Mahal, 700  
 Tallahassee, Fla, 217  
 Tampa, Fla., 218  
   *See also* Cities (U. S.)  
 Tanganyika Territory, 535  
   Area & population, 526  
   Volcano, 689  
 Tangier, 634, 635  
 Tank, military: Invention, 443  
 Tannenberg, Battle of, 715  
 Taoists: Number, 447  
 Tariffs:  
   Fordney-McCumber, 203  
   Hawley-Smoot, 344  
   Tariff Commission, 401  
   Trade Agreements Act, 345, 346, 349, 351  
 Tasmania, 685  
 Tate Gallery, 697  
 Taxes:  
   City tax rates, 238-47  
   Excise taxes, 350  
   Gasoline taxes, 321  
   Poll taxes, 382  
   Sales tax: autos, 321  
   *See also* Income tax  
 Taxidermists: Number, 729  
 Taylor, Zachary:  
   Biography, 387  
   Cabinet, 403  
   Election, 372  
   Family, 397  
   Minority President, 428  
 Teachers. *See* Schools  
 Teheran Conference, 408  
 Telegraph industry:  
   Construction, 720  
   Hours worked, 725  
   Invention of telegraph, 444  
   Wages, 725  
 Telephone industry:  
   Construction, 720  
   Hours worked, 725  
   ICC, 400-01  
   Wages, 725  
 Telephones:  
   Countries: leading, 743  
   Families with: by state, 733

In use, 728  
 Invention, 444  
 Telescopes:  
   Astronomical, 511  
   Invention, 444  
 Television:  
   Advertising, 729  
   Exports, 738  
   First commercial broadcast, 444  
   Homes with, 319  
   Invention, 444  
   Networks, 318  
   Sets, 319  
   Sets: by city, 238-47  
   Sets: production, 723  
   Stations, 318  
   Stations: by city, 238-47  
   Statistics: by year, 319  
 Temperature, 437  
 Tennessee:  
   General information, 231  
   Evolution trial, 714  
   *See also* States  
 Tennessee River, 231, 309  
 Tennessee Valley Authority, 231, 344, 401  
 Tennis, 792-94  
   1956 champions, 866  
   British champions, 794  
   Court tennis, 812, 856  
   Davis Cup, 792  
   History, 792  
   Lawn tennis, 792-94, 823  
   Measurements, 823  
   Professional tennis, 800  
   Squash tennis, 812, 856  
   Table tennis, 830, 866  
   U. S. champions, 793-94  
   Wightman Cup, 792  
   Wimbledon champions, 794  
 Terre Haute, Ind., 259  
 Territorial expansion: U. S., 259  
 Tetanus, 446  
 Texas:  
   General information, 231  
   War of Independence, 714  
 Texas City, Tex., 706  
 Textbooks: Free to pupils, 286  
 Textile industry:  
   Exports, 738  
   Hours worked, 724  
   Imports, 738  
   Prices, 727  
   Production, 721  
   Wages, 724  
 Thailand:  
   General information, 664-65  
   Tidal wave, 705  
   *See also* Countries  
 Thanksgiving Day, 462, 463, 464  
 Thaw-White case, 714  
 Theater:  
   Longest Broadway runs, 717  
   N. Y. Critics' awards, 478  
   Pulitzer Prizes, 473  
   Theaters: number, 729  
 Thefts: Number & arrests, 282  
 Theories: Scientific, 444  
 Thermometer:  
   Invention, 444  
   Scales, 437  
 Thermopylae, Battle of, 73  
 Thiamine: in foods, 440  
 Third International, 713  
 Thirteenth Amendment, 425  
 Thirty Years' War, 597, 660, 714  
 Thomas, Norman, 374-79  
 Thorpe (Greatest Athlete), 847  
 Tiberias, Sea of, 617  
 Tibet, 571-72  
 Tidelands Oil Bill, 349, 350  
 Tides, 510  
   Tidal shoreline: U. S., 309  
 Tidal waves, 705-06  
 Tientsin (China), 568, 704  
 Tierra del Fuego, 567, 685  
 Tigris, 688  
 Tilden, Samuel J., 372  
 Time:  
   Cities: foreign, 501  
   Cities: U. S. & Canada, 502  
   Kinds, 487  
   Zones, 487-88  
   Zones: map, 154  
 Timor, Portuguese, 653  
   Area & population, 651  
 Tin industry:  
   Imports, 738  
   Production, 741  
 Tires:  
   Pneumatic: invention, 444  
 Titanic (ship): Sinking, 707  
 Titicaca, Lake, 688  
 Tito, Marshal, 678, 679  
 Tobacco industry:  
   Consumer spending, 719  
   Establishments, 726  
   Exports, 738  
   Hours worked, 724  
   Imports, 738  
   Income: marketing, 731  
   Prices: index, 727  
   Production: U. S., 721, 732  
   Wages, 724  
 Tobago. *See* Trinidad  
 Togo (French), 595  
   Area & population, 589  
 Togoland, 526  
 Tokyo, Japan, 621, 704  
   World War II, 207  
   *See also* Cities (world)  
 Toledo, Ohio, 228  
   General information, 247  
   *See also* Cities (U. S.)  
 Tonga, 560  
   Area & population, 526  
 Tongking, 596  
 Topeka, Kans., 220, 259  
 Tornados, 312, 706  
 Toronto, Ont., 502, 545  
   Library, 697  
 Toscanini, Arturo: Retires, 211  
 Tourist camps: Number, 729  
 Tours, Battle of, 714  
 Town: Oldest in U. S., 218  
   *See also* Cities (U. S.)  
 Township (meas.): Defined, 438  
 Track and Field, 827-29  
   1956 champions & records, 859-60  
   A.A.U., 859  
   Boston Marathon, 860  
   Mile runs, 826, 830  
   Olympic Games, 795-98  
   Walking, 880  
 Tractors:  
   Exports, 738  
   Invention, 444  
 Trade:  
   Agreements: legislation, 345, 346, 349, 351  
   Countries: by year, 739  
   Countries: leading, 743  
   FTC, 400  
   ITO, 757  
   Legislation, 343, 349, 350  
   U. S.: foreign, 738, 739  
 Trademarks: Procedure, 319  
 Trade Unions. *See* Unions  
 Trafalgar, Battle of, 713  
 Trains. *See* Railroads  
 Transbay Bridge, 702  
 Trans-Jordan. *See* Jordan  
 Transportation industry:  
   Consumer spending, 719  
   Death rates, 275



**Transportation Industry—(cont.)**

Employment, 724  
 Equipment: production, 721  
 Hours worked, 724  
 Passenger traffic, 730  
 Plant & equipment expenditures, 723  
 Price index, 719  
 Wages, 724  
*See also* Railroads  
 Transvaal, 540  
 Trapezoid: Area, 436  
 Trapshooting, 873  
 Travel: Consumer spending, 719

Travers Stakes, 843-44

Treason: Defined, 422

Treasury, U. S. Dept. of, 398

Education: funds, 286

Secretaries, 402-05

**Treaties:**

Hay-Bunau-Varilla, 343

Hay-Pauncefote, 343

Japanese, 622

North Atlantic: text, 410-11

U. S., Australia, N. Z., 411-12

U. S., Philippines, 412

Versailles, 343

*See also* World War II

Trent, Council of, 712

Trenton, N. J., 226, 259

Triangle: Area, 436

Trichinosis, 446

Trieste, 619, 665

Trinidad, Colo., 502

Trinidad & Tobago, 548-49

Area & population, 526

Trinity Sunday, 463

Triode: Invention, 443

Triplets: Number born, 269

Trojan War, 714

Tropic of Cancer, 508

Tropic of Capricorn, 508

Tropical storms, 311

Tropical year, 510

Trotsky, Leon, 204, 206, 669

Trotting. *See* Harness racing

Troy: Destroyed, 714

Troy, N. Y., 259

Troy weight, 435

Trucial Coast, 514-15

Trucks: Freight, 730

Trujillo, Rafael J., 579

Truman, Harry S.:

Biography, 394

Administrations, 342

Assassination attempt, 354

Cabinet, 405

Election, 364

Family, 397

Minority President, 428

Nomination, 370

Point 4 program, 209, 348

Removes MacArthur, 210

Steel industry seizure, 210

Truman Doctrine, 208

Trusteeships, 238, 755

*See also* United Nations

Tsars: Russia, 184

Tube, radio: Invention, 443

**Tuberculosis:**

Bacillus: Discovery, 444

Death rates, 274

Incubation & communicability, 446

Tucson, Ariz., 214

Tulsa, Okla., 228, 259

**Tungsten:**

Filament: invention, 443

Imports, 738

Tunis, Tunisia, 665

Tunisia, 665-66

Turbojet: First flight, 482

**Turkey:**

General information, 666-68

Aid bill: U. S., 347, 348

*See also* Countries

Turkeys: On farms, 732

Turntables: Phonograph, 320

Tuscaloosa, Ala., 214, 332

Tutankhamen: Tomb, 715

Tweed Ring, 715

Tweeter: Defined, 196

Twelfth Amendment, 425

Twelfth Night, 461

Twentieth Amendment, 426-27

Twentieth Century Fund, 717

Twenty-first Amendment, 427

Twenty-second Amendment, 427

Twilight: Cause, 511

Twin Falls, Idaho, 218

Twins: Number born, 269

Tydings-McDuffie Act, 345

Tyler, John:

Biography, 387

Cabinet, 403

Family, 397

Typewriter: Invention, 444

Typhoid, 446

Death rates, 274

Typhoons, 756

**U**

Ubangi-Shari, 593

Area & population, 589

Uganda, 535-36

Area & population, 526

Ukrainian S.S.R., 670

*See also* Union of S.S.R.

Ulster, 533

Ultrahigh frequency, 196

**Unemployment:**

By year, 261, 724

Insurance, 345, 750-51

Union City, N. J., 259

Union Labor party, 372

Union of South Africa. *See* South Africa

Union of Soviet Socialist Republics:

General information, 668-73

Atomic bomb, 209

Bases, 134-35

Economy: comparison with U. S., 81-89

Five-year plan, 204

Germany: nonaggression pact, 206

Hydrogen bomb, 210

Jewish physicians arrested, 210

Purge, 205

Recognized by U. S., 204

Rulers of Russia, 184

Trials, 205

*See also* Countries

Union party, 372, 376

Unions: Leading, 726

*See also* Labor

Unitarians, 451

United Automobile Workers, 726

United Kingdom. *See* Great Britain

United Mine Workers, 726

Fined, 209

**United Nations:**

Actions and major cases, 752-53

Agencies, 756-57

Aggression: action against, 763-64

Atomic energy control, 752

Charter: text, 759-71

Children's Fund, 347

Costs, 758

Delegation heads, 758

Disarmament Commission, 754

Disputes: settlement, 763

Economic and Social Council, 754, 756, 766-67

Established, 208

Flag, 758

General Assembly, 754, 760-61

Greece, 752

Headquarters, 755

India, 752

Indonesia, 752

International Court, 769-70

Iran, 752

Israel, 752

Italian colonies, 752

Kashmir, 752

Korea, 753

Major cases and actions, 752, 753

Members, 753

Membership procedure, 759-60

Military Staff Committee, 764

Netherlands, 752

Organs: principal, 754-55, 760

Pakistan, 752

Palestine, 752

Presidents: General Assembly, 15, 754

Principles, 759

Purposes, 759

Secretariat, 754, 770

Secretaries-General, 754

Security Council, 754, 756, 762-63

Territories: non-self-governing, 767

Trusteeship Council, 755, 756, 769

Trusteeships: system, 767

Trusteeships: U. S., 238

U.S.S.R., 753

U. S.: Delegation to 11th Gen. Assem., 758

U. S.: Permanent mission, 758

**United States:**

Agencies: independent, 398-401

Area (1790-1955), 250

Armed Services, 355-64

Bills & treaties, 343-51

Births, 267-70

Cabinet members (1789-1956), 402-05

Cities, 238-47

Congress: members, 22-27

Constitution, 416-27

Continental Congresses, 429-30

Crime, 282-83

Deaths, 272-77

Declaration of Independence, 413-15

Diplomatic personnel, 353-54

Economy, 718-44

Education, 284-305

Elections: Presidential, 22, 369-81

Executive Departments, 398-99

Expectation of life, 279-80

Flag, 431-33

Forest resources, 307

Geography, 306-09

Geography: map, 154

Great Seal, 335

Growth, 259  
 History, 336-42  
 Immigration, 253, 254  
 Impeachments, 406  
 Life expectancy, 278-80  
 Maps, 150-54  
 Marriages & divorces, 261-66  
 Mileages, 322-25  
 National Park System, 328-30  
 Population, 250-61  
 Postal regulations, 365-68  
 Presidents, 363-97  
 Religious groups, 447-51  
 Social Security, 747-50  
 SEATO, 213  
 Speakers of House, 407  
 States, 214-38  
 Supreme Court Justices, 406  
 Territories & possessions, 259  
 Time zones: map, 154  
 Trusteeships, 238  
 Vital statistics, 250-81  
 For further details. *See* individual entries  
*See also* Countries  
 United States (ship), 718  
 United States Bank, 337, 338  
 United States Information Agency, 401  
 United States National Museum, 332  
 United States of Indonesia. *See* Indonesia  
 United Steelworkers, 726  
 Universal Postal Union, 757  
 Universalist church, 451  
 Universities. *See* Colleges  
 University City, Mo., 224  
 Unleavened Bread, Feast of, 461  
 Uranium: Deposits, 741  
 Uranus (planet), 509  
 Symbol, 503  
 Urban population, 251, 252  
 Uruguay:  
 General information, 673-74  
*See also* Countries  
 Utah:  
 General information, 231-32  
*See also* States  
 Utica, N. Y., 259  
 Utrecht, Netherlands, 636

— V —

V-J Day, 208  
 Vaccination: Discovery, 444  
 Vacuum cleaners, 723, 728  
 Vagrancy: Arrests, 282  
 Valences (chem.), 441-42  
 Valentine's Day, 461  
 Valley Forge, 229  
 Van Buren, Martin:  
 Biography, 386  
 Cabinet, 402  
 Election, 371  
 Family, 397  
 Vancouver, Br. Columbia, 543  
 Vanderpoel Gallery, 331  
 Vanzetti & Sacco, 204  
 Vargas, Getulio: Suicide, 523  
 Variety stores, 727, 728  
 Vatican City State:  
 General information, 674-75  
 Library, 696  
 Structures, 700  
*See also* Roman Catholic Church  
 Veal: Farm prices, 731  
 Vegetables:  
 Consumption, 719  
 Exports & imports, 738

Income: marketing, 731  
 Prices: farm, 731  
 Venezuela:  
 General information, 675-76  
*See also* Countries  
 Venice, Italy, 699  
 Venus (planet), 509  
 Symbol, 503  
 Verdun, Battle of, 715  
 Vermont:  
 General information, 232  
*See also* States  
 Versailles, Palace of, 700  
 Versailles, Treaty of, 203, 597  
 Hitler defies, 205  
 Very high frequency, 196  
 Vesuvius, Mt., 689  
 Veterans:  
 Benefits, 349, 364  
 Bonus bills, 344, 346  
 Education, 286  
 Veterans Day, 462, 464  
 Veto power: Presidential, 352, 419  
 Vice Presidents (U. S.):  
 Candidates, 371-80  
 Election: procedure, 425  
 List of, 396  
 Salary, 348, 350, 397  
 Term: end of, 427  
 Vicksburg, Battle of, 711  
 Vicksburg, Miss., 224  
 Victoria, B. C., 502, 545  
 Victoria (Isl.): Area, 685  
 Victoria, Lake, 688  
 Victoria and Albert Museum, 697  
 Victoria Falls, 686  
 Victorian era, 527  
 Vienna, Austria:  
 Congress of Vienna, 712  
 Library, 696  
 Museum, 698  
 Ring Theater fire, 706  
 Zoo, 699  
*See also* Cities (world)  
 Vietnam, 596, 676, 677  
 Vietnam, 596, 676-77  
 Area & population, 589  
 Virgin Islands (British), 548  
 Virgin Islands (U. S.):  
 General information, 237  
*See also* States & Territories  
 Virginia:  
 General information, 232-33  
*See also* States  
 "Virginia Dynasty," 337  
 Virginia Museum of Fine Arts, 335  
 Virus: Crystallized: discovery, 444  
 Vitamins:  
 Discoveries, 444  
 Of foods, 440  
 Vocational schools, 287  
 Volcano Islands, 238  
 Volcanoes, 689-90  
 Eruptions, 705  
 Volga, 687  
 Volleyball, 863  
 Volstead Act, 343  
 Volume:  
 Formulas for, 436  
 Measures, 434  
 Voting:  
 Qualifications: by state, 382  
 Rights of citizens, 426  
 Woman suffrage, 426, 715  
*See also* Elections  
 Vulcanizing: Invention, 443

— W —

Wabash River, 309

Waco, Tex., 259  
 Wadsworth Atheneum, 335  
 Wages:  
 By year, 724, 725  
 Controls, 208, 210  
 Industry, 724, 725  
 Minimum (1933), 345  
 Minimum (1938), 346  
 Minimum (1949), 348  
 Minimum (1955), 351  
 Wagner-Connelly Act, 345  
 Wake Island, 237  
 Waldorf-Astoria, 709  
 Wales:  
 Area & population, 527  
*See also* Great Britain  
 Wall: China, 712  
 Wallace, Henry A., 370, 379, 405  
 War, U. S. Secretaries of, 402-05  
 War debts: Moratorium, 344  
 War of 1812, 715  
 Casualties, 362  
 War Trials, 208, 209  
 Warm Springs, Ga., 218  
 Wars:  
 Casualties, 362-64  
 Outlawed, 344  
*See also* individual wars  
 Warsaw, Poland, 645  
 Warwick, R. I., 230  
 Washington, George:  
 Biography, 383  
 Birthday (holiday), 461, 464  
 Cabinet, 402  
 Elections, 371  
 Family, 397  
 Hall of Fame, 479  
 Mt. Rushmore carving, 230  
 Washington, D. C. *See* District of Columbia  
 Washington (state):  
 General information, 233  
*See also* States  
 Washington Conference (1945), 203  
 Washington Monument, 217  
 Washington Naval Conference (1922), 203  
 Washington Park Futurity, 844  
 Watches: Imports, 738  
 Water:  
 Boiling, freezing points, 437  
 Displacement, 444  
 Water area: U. S., 309  
 Water polo, 799, 872  
 Water power: TVA, 344  
 Waterbury, Conn., 216, 259  
 Waterfalls: Famous, 686  
 Waterloo, Battle of, 220, 713  
 Waterloo, Iowa, 259  
 Watertown, N. Y., 502  
 Watertown, S. Dak., 230  
 Waterways: Traffic, 730  
 Weather:  
 Climate of U. S. cities, 312-14  
 Severe storms, 310-12  
 Webster, Daniel, 371, 402, 403  
 Wedding anniversaries, 62  
 Weights:  
 Chemical elements, 441-42  
 Defined, 435-39  
 Weimar Constitution, 597  
 Welland Canal, 692  
 Welles, Orson: "Attack from Mars," 206  
 West Germany. *See* German Federal Republic  
 West Indies:  
 Discovery, 681  
 Map, 149



- West North Central States:  
Economy: statistics, 733  
Population: marital status, 262
- West Point, N. Y., 355
- West South Central States:  
Economy: statistics, 733  
Population: marital status, 262
- West Virginia:  
General information, 233  
See also States
- Western European Union:  
Germany admitted, 211  
Member nations, 213
- Westminster Abbey, 700
- Westphalia, Peace of, 660
- Wheat:  
Exports, 738  
Flour: consumption, 719  
Prices: farm, 731  
Production: U. S., 732  
Production: world, 742
- Wheeler-Rayburn Act, 345
- Wheeling, W. Va., 233, 259
- Whig party (U. S.), 371-72
- White House, 407
- White House Office, 398
- White slave traffic, 283
- White Sulphur Spgs., W. Va., 233
- Whitney, Mt., 306
- Whitney Museum, 331
- Whitsunday, 462
- Who Was Who, 113-23
- Wholesale trade:  
Employment, 724  
Establishments, 722, 726  
Hours worked, 725  
Prices, 727  
Wages, 725
- Whooping cough, 446
- Death rates, 274
- Who's Who, 90-112
- Wichita, Kans., 220, 259
- Wichita Falls, Tex., 259
- Widener Handicap, 844
- Widows & Widowers:  
Deaths, 274  
Number, 262
- Wilderness, Battle of, 711
- Wilkes-Barre, Pa., 259
- Willkie, Wendell, 370, 377
- Williamsburg, Colonial, 333
- Wilmington, Del., 216, 259
- Wilmington, N. C., 502
- Wilson, Woodrow:  
Biography, 292-93  
Cabinet, 404  
Elections, 373  
Family, 397  
14-point address, 203  
Hall of Fame, 479  
Minority President, 428  
Nominations, 370
- Wilson, Mt.: Observatory, 511
- Wilson Cloud Chamber, 444
- Wind Cave National Park, 328, 691
- Wind speeds: Hurricanes, 310-11
- Windsor, Duke of: Marriage, 205
- Windward Islands, 549
- Area & population, 526
- Winnipeg, Manitoba, 502, 526
- Winston-Salem, N. C., 227, 259  
See also Cities (U. S.)
- Winter (1957), 509
- Wire: Measurement, 438
- Wireless: Invention, 443
- Wisconsin:  
General information, 233-34  
See also States
- Witch trials (Salem), 715
- Wives: Of Presidents, 397
- Women:  
Armed forces: U. S., 363  
Arrests: number, 282  
College graduates, 287  
Death rates, 274  
Deaths, 272  
First airline pilot, 482  
First licensed pilot, 481  
First to fly, 480  
First transatlantic solo, 482  
First U. S. air pilot, 481  
Firsts, 716  
Life expectancy, 278-81  
Marital status, 262  
Marriage, 266  
Number, 253  
Ratio to men, 252  
Voting rights, 426  
Woman suffrage, 715  
Workers, 261
- Wonders:  
Seven of world, 682
- Wood Memorial, 844
- Wood pulp:  
Imports, 738  
Production, 723
- Woof: Defined, 197
- Wool:  
Imports, 738  
Prices: farm, 731  
Production: world, 742
- Woolworth Building, 709
- Woonsocket, R. I., 230, 259
- Worcester, Mass.: 222  
General information, 247  
See also Cities (U. S.)
- Words:  
Crossword puzzle guide, 158-24  
New words & meanings, 185-97  
Words frequently misspelled, 197-200
- World:  
Air mileages, 326-27  
Cities: largest, 704  
Climate: extremes, 692  
Dimensions, 683  
Elevations, 683, 684  
Land areas, 683  
Population, 250, 683  
Population densities: high, 683  
Radio sets: number, 320  
Religions, 447  
Round-the-world flights, 481, 482  
Seven wonders, 682  
See also Geography
- World Court, 203, 344, 345
- World Health Organization, 757
- World Meteorological Organization, 757
- World Series, 774-80
- 1956 statistics, 876-78
- World War I:  
Casualties, 362, 364  
Debts: moratorium, 344  
Declaration: U. S., 343, 346  
Events, 715  
Nations in combat, 213  
Versailles Treaty, 343
- World War II:  
Casualties, 362, 363  
Chronology, 206-08  
Conferences, 408-10  
Nations in combat, 213  
Treaties: Japanese, 349, 622  
Treaty: Bulgarian, 347, 563  
Treaty: Finnish, 586  
Treaty: Hungarian, 347, 607  
Treaty: Italian, 347, 619  
Treaty: Rumanian, 347, 654  
Veterans: benefits, 349  
War trials, 208, 209  
See also Conferences: individual countries
- Wrestling, 800, 868
- Wyandotte Cave, 691
- Wyoming:  
General information, 234  
See also States

X

X-rays: Discovery, 444

Y

- YMCA, 717
- YWCA, 717
- Yakima, Wash., 233, 502
- Yalta Conference, 408-09
- Yangtze Kiang, 687
- Yellowstone National Park, 328
- Geyzers, 691-92
- Waterfalls, 686
- Yellowstone River, 309
- Yemen:  
General information, 678  
United Nations, 753
- Yerkes Observatory, 511
- Yom Kippur, 462, 463
- Yonkers, N. Y., 227, 259
- York, Pa., 259
- Yorktown, Battle of, 711
- Yosemite National Park, 528
- Young Men's Christian Association, 717, 872
- Young Plan, 204
- Young Women's Christian Association, 717
- Youngstown, Ohio, 227, 259
- Yugoslavia:  
General information, 678-79  
See also Countries
- Yukon Territory, 545
- Yuma, Ariz., 214

Z

- Zanzibar, 541
- Area & population, 526
- Zeppelin:  
First, 480  
Invention, 444
- Zero: Absolute, 437
- Zeus: Statue at Olympia, 682
- Zinc industry:  
Imports, 738  
Production, 722, 741
- Zion National Park, 328
- Zodiac: Signs, 503
- Zoological gardens, 698-99
- First, 698, 716
- Zoroastrians: Number, 447
- Zurich, Switzerland, 662

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